London Post-graduate Course:

ON THE

NATURE OF LUPUS,

WITH ESPECIAL REFERENCE TO ITS RELATION TO TUBERCULOSIS.

Delivered at the Examination Hall, Jan. 27th,

BY JONATHAN HUTCHINSON, F.R.S., LL.D.

LECTURE III.

GENTLEMEN,—I have yet several other forms of lupus to mention to you if time permitted. I should like to have shown that in some cases its processes very closely resemble those of an eczema, and that in others the follicles of the larger hairs may be attacked by preference, and that a sort of lupus-sycosis is the product. We might also have brought under consideration the curious and very interesting malady which Hebra has named "rhino-scleroma," in which the nostrils and upper lip become involved in a lumpy, thick, indolent growth, which is certainly infective, almost as certainly inflammatory in its beginning, and very prone to return after operations. This disease is not absolutely restricted to the parts from which it takes its name. Although very different in many features from other forms of lupus, I could, I think, have easily proved to your satisfaction that in its main features it comes much closer to lupus than to any other malady, and that it has good claims to be one of the family. My motive in bringing before you the different forms of disease which were the subject of our last lecture has been double. First, I have thought that these various types of morbid action, although most of them very rare in practice, are yet of sufficient interest to claim our careful recognition and study. Next, and for the present occasion chiefly, I have wished to convince you of the statement, with which I set out, that it is quite impossible to restrict the term "lupus" to any one form. We can no longer say with any regard to pathological accuracy that the disease which eats away the tip of the nose and the alæ nasi, and is attended by the brownish-yellow apple-jelly deposit, is "lupus," and that the others have nothing to do with it. We can no longer speak of a "true lupus" and place the other maladies apart as if they bore resemblance only, and had no real relationship. No, the relationship is real, and its bond consists in this, that all these various maladies depend upon inherited tissue-vice. That inheritance renders its possessors liable to chronic inflammations, which assume specialised peculiarities in each in connexion with the inheritance of other tendencies, and modifiable also by the part of the body on which they are first displayed. In some connexion, as yet very ill understood, it would appear that these inflammations are peculiarly apt to be attended by the development of the tubercle bacillus. Our knowledge does not permit of our being in any way definite as to what the relationship of the two really is. We must wait for further facts. I am bound, however, to repeat what I have already said, that, looking at the facts as we have them from a clinical point of view, they do not seem to favour the belief that infection with the tubercle bacillus is the sole and efficient cause of the disease which we call "lupus."

The possession by inheritance of peculiarities as regards cell nutrition, and proclivity to its disturbance, seems to me at the basis of all maladies which assume the lupus type. It is also, doubtless, of many others. In lupus that which is inherited seems to be a susceptibility to external influences, above all to that of cold, but sometimes to that of heat also. This appears to me to be the key to a real knowledge of the nature of the disease. I have suggested over and over again that lupus erythematosus is after all only a modified form of chilblain. Amongst the modifications which it has received there is one which I admit to be all important. It is this that the products of the inflammatory action, or perhaps it would be safer to say its attendants, become capable of spreading the disease by contagion. Chilblain inflammation is but little if at all capable of infecting the adjacent tissue; but it has become so when it assumes the name of lupus erythematosus. This is its chief peculiarity. Since I had the pleasure of addressing you last week a case has come under my notice which so emphatically illustrates these views that you will almost suspect that I have invented it. I show you the drawings from the case of a lady residing in Essex, a little past the middle period of life. You will see that her hands are covered with patches of dusky erythema which affect the palmar surfaces more than the dorsal ones. Her fingers are swollen, and their tips peeling and excoriated. The nails are thin, softened, and flattened out by the swelling of the fingers. Her hands are disabled, and she cannot dress herself without the assistance of her maid. We turn to her face, and on the nose and cheeks we find the characteristic bat's wing patches of lupus erythematosus, and a similar condition involves both her ears. Her affection began in the beginning of the present winter, which, as you know, has been exceptionally cold. In reference to the possible influence of season, however, it must be remarked that the patient has been living in warm rooms and surrounded by every comfort. Shall we call the disease lupus erythematosus or acute erythematous chilblains? In one sense it matters but little what we call it; for in the beginning I hold that they are the same thing. As regards prognosis, however, very much depends upon the name. If it be chilblains only, it will probably pass wholly away when the warm weather comes. If it be lupus, it will be relieved by warmth, but not cured. It will demonstrate infective qualities, other patches will occur on adjacent parts, and it may probably prove incurable. I have myself no doubt whatever that the disease has to some extent passed into the lupus condition, and that the prognosis just suggested will be the one realised. At the same time, I have no doubt that the red patches which you see on the hands are to all intents and purposes acute chilblains, and that they will pass away when the warm weather comes. In saying this I am not speaking at haphazard. A lady whom I have been attending for the last three years for patches of lupus erythematosus on her nose, cheeks, and chest had her disease begin during cold weather by an attack of inflammation of the hands, attended by cracking and excoriation of their tips. Very soon after this a patch formed on her nose, and although her hands have long since got well and continued so, the disease in most typical conditions still continues on her face. This will be a suitable place for me to tell you that both these ladies had enjoyed very fair health through life up to the date of the attacks which I have described. Both of them had suffered from chilblains in childhood, but in neither had the proclivity been severe, nor had it persisted in adult age. In both of them, as I hold is usual in lupus erythematosus, there was an overwhelming family tendency to tuberculosis. Miss G——, the first patient, had lost a brother and a sister from phthisis, and, to use her own expression, "all her father's family excepting himself had died of it." She herself, on account of chest delicacy, had been obliged to take cod-liver oil for six months. In Mrs. K——'s case (the second one) the facts were almost equally strong, and she herself, although a lady of great energy, was fragile and delicate. You will ask, on the hypothesis that lupus erythematosus is not a bacillary disease, and on the more than hypothesis that chilblains have nothing to do with bacilli, what is the bond of connexion between tuberculosis, lupus erythematosus, and chilblains? I must reply with what is only a conjecture. The lupus and the chilblains are directly and essentially connected as depending on the same kind of cell organisation and vascular endowment. They are influenced by the same kinds of disturbance of vascular equilibrium—such, for instance, as sex, inherited delicacy, &c., which are at the basis of Raynaud's symptoms. Their connexion with tuberculosis is probably indirect and non-essential. They imply and reveal a state of constitution in which the bacillus, once implanted, will easily flourish. The discoveries of the future may perchance demonstrate a closer connexion than this, but for the present this is all that we can say.

Amongst the best established and yet the most remarkable of the laws regulating the transmission of tendency to disease are those which produce what are called "family diseases." By this term, in the special and conventional sense, it is not meant that there is tendency to the recurrence of the same malady in successive generations, but that in one and the same family of children several examples of the same malady are produced.

Family diseases, using the term in this sense, are all more or less peculiar; although they approach and resemble, they are never exactly the same as those which are transmitted

from generation to generation. Ichthyosis is one of the best examples of what is meant; but deaf-mutism, colour-blindness, retinitis pigmentosa, and a host of other maladies, also afford examples of it. Family diseases are by no means always congenital; indeed, as a rule, they are not so, but wait until the patient has attained a certain age, and until the tissues have been subjected, so to speak, to a certain amount of trial in the highway of life, before they are developed. Then it is found that they will not bear ordinary exposure. The skin becomes dry and harsh in the case of ichthyosis, or the retina speckled with pigment in the case of that of retinitis pigmentosa. Although, as just said, these family maladies are never the exact reproduction of any other recognised disease, yet they have, I think, invariably their prototypes, which they resemble, and which probably stand to them in some mode of parental relationship. We must suppose for their explanation that in the father and mother of children so affected certain peculiar inheritances meet and become welded together in their offspring. Amongst the minor forms of disease which come under this law of family production I believe that we must count some cases of exaggerated tendency to freckles and of some others to chilblains. Probably there is a family form representative of nearly all the types of intrinsic disturbance of health. I exclude by the word intrinsic all maladies caused by accidents or due to contagion. Now it happens that there is a family disease of which the following are the main features:—The children, several in the family, and always all of them apparently healthy at the time of birth, become in early childhood liable to the production, on a most extraordinary scale, of freckles. At first the disease is thought to be only freckles, and in many cases it stops there; but in some others the freckles inflame and become vascular, and ulcerations occur, and when they heal little vascular tufts—stigmata—remain. The face is always the part most severely affected, and exposure to either sun or cold are the influences which exaggerate the disease. The tip and alæ nasæ are often attacked, and then sometimes to a considerable extent destroyed. In later stages bossy masses of granulation tissue may form on the ulcerated surfaces, and later still, in exceptional instances, the ulcers may assume the condition of epithelial carcinoma. Some of the milder cases of this malady recover, and many probably survive without actually recovering; in not a few, however, it ends fatally in an early period of adult life. It fell to my lot, through the kindness of Mr. Balmanno Squire, to have the opportunity of examining two children who were the subjects of this malady, and who were the first in whom it had been observed in Britain. I cannot tell you the interest which they excited in me. "Here," I exclaimed, "we have the family form of lupus." It was a disease certainly not common lupus, but partaking of all its characters, affecting the same parts, evoked by the same class of causes, and tending to the same results. Subsequently, when I became acquainted with cases which were attended by pigmentation only, I was inclined to modify the expression, and to say that it was a family form of freckles. But, later still, reviewing the facts which have since been so ably collected by numerous observers, I am inclined to go back to my original position, and to hold that Kaposi's disease is really and essentially a family form of lupus. You will see that it unites in itself lupus vulgaris and lupus erythematosus—being symmetrical, but at the same time showing a tendency to destroy by ulceration. Its relationship to freckles is, of course, undoubted, and I put it aside, not as in any degree ignoring it, but simply because the relationship to lupus is much more important. Probably after all the tendency to freckles, when extreme, reveals an irritability of cell structures of the same kind as that which lupus discloses. I need scarcely remind you, for it has been often remarked, that strumous children are very liable to freckle.

The argument which I adduce from this demonstration of a family form of lupus is that the latter cannot be a disease due to the accidental implantation of a parasite. If it were so it could not have a family form. As to what the value of the argument may be, and as to the cogency of the facts on which I have built it, I leave them for your consideration. I have, however, much interest in showing you, especially as I omitted them in their proper place, a series of drawings illustrating cancer as it occurs in the ulcerations of lupus. Some of them are taken from a report by Dr. Bayha of Tubingen. By their side I show a beautiful drawing lent me by Dr. Radcliffe Crocker, showing a fungating mass in Kaposi's disease. I think you will find their comparison instructive.

It remains to say a few words in defence of the attempt to constitute a family of lupus diseases, instead of allowing one single member of it to arrogate that name and leaving a whole series of cognate affections to receive each for itself a distinctive designation. It is quite possible that I have not succeeded in convincing you, or at any rate all of you, that the maladies of which descriptions have been given are really all of them in their essential nature lupus. I may, however, claim to have brought before you clinical evidence that these several maladies do exist. Even of the very rarest I have been able to produce more than one case (with the exception, perhaps, of Dr. Morrow's), and thus to prove that the malady in question keeps close to its type. Whilst this keeping close to type is true of a certain number of cases in each group, I think I may also claim to have proved by demonstration that there are ill-marked or mixed examples of every one of these type-forms which constitute connecting links between them. If now we refuse to recognise a lupus family, if we continue to insist that there is a "true lupus," that lupus erythematosus is distinct from lupus vulgaris, and that the other diseases which I have claimed as belonging to the same family are yet further apart from it, what is our position? It seems to me to be this: that we shall have to continue to use a number of separate names, and to invent many new ones, burdening the memory of the observer in each instance with detailed descriptions, and at the same time not throwing the least light by nomenclature on the real nature of the things described. We shall be involved in what is surely an *a priori* improbability—the suggestion that there are a large number of separate maladies resembling each other in some of their features, but in reality wholly different, having neither known parentage nor relationship, and being in many instances *sui generis*. Such would certainly be the position, if we refuse to accept a lupus family, of the maladies known as rhino-scleroma, lymphangeioma pigmentosum, Kaposi's disease (or xeroderma pigmentosum), tuberculosis papulomatosa cutis, and a number of others. If we accept, on the other hand, the word lupus as the family name for them all, coupling with it in each instance some distinctive epithet, this laboriously contrived confusion is avoided. The diseases in question, as I have already, and, I fear, at too great a length, endeavoured to prove, have all of them these features in common. They attack chiefly those parts of the surface of the body which are exposed to the influence of cold and irritants, and they occur by preference to those who are by inheritance or acquisition of somewhat feeble organisation, and who are proved to be in greater or less degree liable to the attacks of the tubercle bacillus. Every one of the diseases named is developed most commonly in the period of adolescence. They are all infective in their local qualities, and continue to spread slowly for an indefinite number of years; and it is possible in every one of them that after prolonged duration as a non-malignant chronic inflammation a tendency to cancer may be shown. Every one of them disorganises the tissues which have been affected by it, and leaves behind it a scar. Concerning almost all of them, we freely admit that syphilis may produce very close simulations, and, at the same time, we utterly deny that their type forms have any connexion, remote or otherwise, with such taint. Finally, and most importantly, it is true that if the word lupus were used in the sense for which I have pleaded, it would in every case to which it is applied afford a clue to a correct treatment. With the exception only of the most erythematous forms of erythematous lupus, destruction by local measures of the infective material is required in every case, and, without any exceptions at all, attention to the general health by the use of a liberally tonic regimen is requisite, together with the protection of the parts from all external irritation, and more especially from cold. As regards prognosis, it is, speaking in general terms, the same in all. Very few cases will be really cured, and in almost all instances, even under the most careful and persevering treatment, an inveterate tendency to relapse, or to a reproduction of the malady, will be witnessed.

I might add that all diseases of the lupus family are liable when inflamed to have the inflammation assume the characters of erysipelas. This is a point which many observers have noted; and, further, it has been generally agreed that after attacks of erysipelas the lupus is usually in a much improved condition. This was an article of creed which the late Mr. Startin was very fond of expressing, and excepting

in erythematosus (in which such attacks may prove fatal), I have always been accustomed to hail erysipelas in lupus as a direct gain to the patient. We must, I think, keep this fact in mind when we examine the results of Koch's treatment.

Before proceeding to endeavour to estimate the different measures of success attending the different plans of treatment for lupus, it may be well to say a few words as to the grounds upon which such plans have been based, and to what may be reasonably expected of them. My argument has been that lupus processes of inflammation originate in persons who are locally or constitutionally of feeble cell nutrition and prone to vascular disturbance. That a parasitic bacillus attends many of them is to be freely admitted; that its implantation constitutes the initial stage of lupus may be strongly doubted. The influence of enfeeblement of the general health, of exposure to weather and to cold as causes of the aggravation of lupus must be admitted by all without a moment's hesitation. It is an old observation that those who live in country districts and are exposed to weather suffer more from lupus than those who dwell in towns. It is also a matter of quite general knowledge that most forms of lupus become worse in winter. Applying these facts to the development of principles of treatment, we should expect that much might be done by attending to the general health of the patient, and by protecting him from the influence of cold. Such is, I may say, undoubtedly the fact. Whatever increases the general tone does tend to restrict the lupus process and to favour the healing of its ulcers. If the patient can be allowed to remain in warm rooms during the winter, or still better, if by changes of climate he may be enabled to enjoy summer weather all the year round, the chances of recovery from lupus will be very much increased. As regards lupus vulgaris I cannot think that it is reasonable to expect a cure, unless advantages of this kind can be obtained. If the patient is still to be exposed to a defective dietary and a hard life, if the vigour of his nutrition is to diminish rather than increase, there will then be no chance of his recovery from his lupus. The causes which set it agoing still remain in action, and they, in conjunction with his constitutional tendency, would begin the disease anew, even if by successful surgery it had been completely cured. As well hope to prevent the recurrence of chilblains in cold weather as that of lupus in a patient who has once suffered from it, and in whom no changes can be made in the conditions of life. In reference to these assertions I might ask attention to the results of treatment of lupus in two special classes of cases in which I think nothing even approaching a cure is ever obtained. I allude to those first, a large class, in whom lupus begins in young persons who are obviously of very feeble health; and secondly to those, a small class, in whom it begins in the aged. Senile scrofula in all its forms is less amenable to treatment than that of young persons, for it occurs at a time when the powers of life are on the wane, and when it is impossible to do anything definite in the way of their reinvigoration. On the other hand, the cases of lupus in which we do obtain cures, or in which we approach them, are those in which the disease begins in young persons or in early adult life, and is not associated with any conspicuous enfeeblement of health or of circulation. In these cases the advance of years is, if accompanied with suitable local and constitutional treatment, in our favour. The patient gets to eat and to drink more, and as the period of growth ceases the constitution often settles down into a state of more assured vigour. To use a popular phrase, "he grows out of his delicacy.'

In what has just been said I have been speaking solely of the constitutional element in lupus; but we must not forget for a moment that there is another, and even more important one—I refer of course to its locally infective tendencies. In a few cases constitutional treatment, or the improvement in health stamina which comes with advancing years, is sufficient to put an end completely to the lupus process. Examples of perfectly healthy scars without the least fragment of lupus tissue remaining, and without any tendency whatever to relapse in winter, may not infrequently be seen under these circumstances. Very often they are in patients who have suffered from the disease on several parts at once, and in whom some patches have undergone cure, whilst others have persisted. Although not very common, they are abundantly sufficient to prove the point that the lupus process may, in exceptional instances, come spontaneously to an end. In the majority of cases, however, it may be freely granted that whatever be done for the benefit of the general health it does not cure the lupus patch. The latter continues in virtue of its own infective elements to spread at its edge and to produce fresh satellites. It is here that surgery comes to our aid. By treating the lupus nodules exactly as we should those of cancer or any other material known to be infective, we can do very much towards effecting a cure. Undoubtedly the surgeon takes the most conspicuous if not really the principal share in the cure of lupus. If I speak a little doubtfully on this point, and if I seem to rate measures of constitutional treatment more highly in comparison with local ones than I have done in some of my former writings on lupus, it is because I have become more and more convinced that it is absurd to expect a permanent cure of a disease by measures which do not include the removal of its original causes. The results of surgical treatment, however careful and persevering, are, I fear, on the whole, strongly confirmatory of this impression, for however excellent may be the cure at first obtained, the disease almost invariably relapses on fresh exposure to cold.

I will now pass to consider the details of the local measures which have been chiefly employed. We will, if you please, consider that enough has been said as to the paramount importance of protection from cold and attention to the general health. The different measures of local treatment have all had a common object—that, namely, of getting rid of the infective material. When I was a student at the York Hospital I was taught to use for this purpose a chloride of zinc paste, sparingly and thinly applied, and I have never since seen better results from any treatment than, as far as my memory serves me, we occasionally obtained from this. Its use, however, is inconvenient on some of the parts which lupus most commonly attacks—the nose, for instance. When I came to London and worked as assistant to the late Mr. Startin at the Blackfriars Hospital, we treated all our lupus patients by repeated applications of the acid nitrate of mercury and an arsenical paste. If the surface were not broken, the acid nitrate was applied; but if there was an ulcer, then it was our practice to fill it with the paste. These applications were made over and over again. Our cases were very numerous and attended frequently, and half my occupation many an afternoon consisted in making these applications. The patients always took tonics and cod-liver oil, and often, for many years together, minute doses of mercury. The results were on the whole very satisfactory, but the treatment was tedious and the periods of attendance very long. When some years later the patients at this hospital passed under my own care, and I had also at the Metropolitan Free and at the London Hospital many other cases, I tried to expedite the cure by the use of the actual cautery instead of the acid nitrate. I had cautery irons of various sizes made, and we used them, under an anæsthetic, very freely. This was long before the introduction of M. Paquelin's ingenious little instrument, and at that time we used to heat our irons in the fire. At the time I thought this method, as regards expedition, a great improvement, and wrote strongly in its favour. I recollect that my friend Dr. McCall Anderson of Glasgow also took it up, giving figures of my cautery irons. Somewhat later Mr. John Gay made the radical proposal that lupus nodules should be cut out with the knife, and treated exactly as we would those of cancer, but unfortunately the inapplicability of this excepting to a small number of cases was only too obvious. You could not cut away the greater part of a man's nose or cheeks. Later still came the introduction of the process of erasion by means of Volckmann's scoops. This attained a very wide popularity, and it is indeed a very efficient method. The general verdict would, I think, appear to be in its favour over all other methods of local destruction. For myself, I may admit that I doubt if it possesses any advantages over the use of the actual cautery or the acid nitrate of mercury. I was accustomed some years ago to use it frequently, but I find myself now falling back more and more on the older methods. Instead of the arsenical paste which Mr. Startin employed so much (Dupuytren's paste), I now use the liquor arsenicalis. The latter may be painted on with a camel-hair pencil, and if the surface be not too large the patient may be trusted to do it himself. It does not perhaps matter so much which of the several methods of getting rid of the lupus tissue we adopt, provided we do it very freely, and repeat it as often as is necessary. I have a decided impres-

sion, however, that the sores left after the acid nitrate or the actual cautery heal better than after the scoop. In many instances undiluted carbolic acid, freely and repeatedly applied, is very efficient, and it has the great advantage that, if the patient be intelligent, he may be trusted to make the applications. I am quite aware that in this sketch I have not enumerated by any means all the methods which are employed in the local treatment of lupus. There are many others, but I think that for the most part they are of the same class. I must not, however, omit to mention that Dr. Unna of Hamburg some years ago introduced a method by the application of plasters containing salicylic acid, which for a time obtained great favour with some well qualified to judge. I cannot speak from much personal experience regarding them, but have formed the impression that they are not less troublesome nor more efficient than some of the other methods. In this connexion it may be well to state that whatever in the nature of a plaster or other application protects a lupus patch from the influence of air and keeps it warm invariably does good. This is of especial importance in reference to lupus necrogenicus and to all lupoid affections of the extremities.

As regards the prognosis of lupus, it is at once to be candidly admitted that examples of complete and permanent cure are rare. At the same time it is to be asserted that under favourable conditions and perseverence on the part of both patient and surgeon, great improvement may be obtained, the disease kept in abeyance, and a condition secured which nearly approaches a cure. In cold weather, however, and if through any influence the state of the health is lowered, relapses are almost certain to occur in almost all cases. I have recently had under observation a lady who when young was quite cured of lupus under the old methods by the late Dr. Anthony Todd Thompson. She enjoyed thirty years of immunity, and has only now relapsed when her tissues and her circulation have become enfeebled by age.

We must now engage in the most interesting question of all in reference to the treatment of lupus—that is, the effect upon it of the injections of Koch's fluid. As all are aware, it is now about three months since this remarkable fluid—a glycerine solution of substances resulting from the pure cultivation of the tubercle bacillus—was placed in the hands of the profession. It was reputed to have the power when used by means of hypodermic injection in most minute quantities of causing the cell structures adjacent to bacillary deposits to inflame. Very soon after its introduction it was announced that the most remarkable demonstrations of its effects were to be obtained in cases of lupus vulgaris. In these it caused the patches to inflame, and certain small fragments to undergo necrosis, and after this a process of healing set in which left the patient, if not absolutely cured, at any rate in a greatly improved condition. During the last three months trials of this remedy have been very extensively made, and I now purpose to attempt some sort of brief *résumé* of their results. I know that it will be said that it is too early to arrive at any conclusions, and, in a certain sense, this must be admitted. Very definite results have, however, on some important points been obtained, and it is highly desirable that, for the guidance of future investigators, these should be stated. My own personal experience—that is, as regards patients under my own care—has been very small, but through the kindness of many friends I have had opportunities of collecting facts over a tolerably wide field. In endeavouring to report upon them it may, I think, be stated in the first place that the original statement that the injection of Koch's fluid does cause lupus patches to inflame has been well borne out, but not without some striking exceptions. In a case under my own care, the portraits of which I have shown you, and concerning which the diagnosis of lupus vulgaris cannot come into any question, no effect whatever was produced on the patches, although the patient's temperature rose on every occasion after nine or ten successive injections. In this case Dr. Heron made the injections and examined the patient at all stages with the utmost care. I avail myself of his skill as a diagnostician in reference to diseases of the lungs to assure you that the patient had no indications of pulmonary tuberculosis which would explain the recurrence of febrile reaction. After about a month's treatment, the injections having ceased to produce fever, we laid them aside, and the patient is now exactly as he was before they were begun. I have received information concerning more than one case in which somewhat similar results were observed. In one, about which Dr. Abraham is my informant, neither febrile reaction nor local reaction resulted, although the patient displayed nodules of the apple-jelly deposit of lupus in considerable abundance. Without an exception all my friends report that in the cases in which the lupus patch has been made to inflame the results, as regards its subsequent improvement, have been very definitely good. Large areas, which had been previously swollen and covered with scab and crust, have been made to heal, and the resulting scar has been flat and sound. No one, however, ventures to report an instance of complete cure. Of the cases which have been shown to me as the most satisfactory, I am bound to say that in every one there has been evidence at some part of the edge of the remains of lupus tissue, ready, I do not doubt, to start into fresh growth on the slightest provocation. In reference to this point I have to make a most important assertion, and that is, that the treatment does not always influence the essential element of lupus. The brown apple-jelly-like deposit which is universally acknowledged as the most characteristic of the lupus conditions sometimes remains untouched. This assertion is illustrated by a case which Dr. Heron was kind enough to show me, and in which he had practised injections some ten or twelve times. In this instance the inflammatory swelling of the parts affected had been quite got rid of and the patient considered herself very much benefited. Nodules of lupus were, however, scattered about her cheeks in a conspicuous manner, and had she come under my care without my knowing anything of the previous treatment I should certainly have regarded her as an ordinary case of lupus, still standing in need of efficient treatment by either the cautery or spoon. In the case which Dr. Gayton was kind enough to send us last week—and which had been under Mr. Watson Cheyne's treatment in King's College Hospital, and had received great benefit—you had equal opportunities with myself of judging whether it could be called a cure. The lupus edge was still there. As substantiating my statement that the treatment does not always destroy the most characteristic part of the lupus formation, I might quote from a letter from Mr. Waren Tay, of the London Hospital, who, speaking of a case in which great benefit has been obtained, remarks "that there still remain nodules which I should much like to attack with the scoop." The cases which appear to derive the greatest benefit are those in which there is most of inflammatory swelling, and in which the more specialised elements of the lupus process are least abundant. You will see the bearing of this statement. Should it be supported by future facts we shall be obliged to suspect that the remedy is, after all, one for certain conditions of the inflammatory process, and not for tuberculosis. Even in this position, however, it is possible that it may still prove of great help to us in the treatment of certain forms of lupus. I am not aware that it has yet been tried in any of the cases of what has been described as perfectly quiet lupus—such, for instance, as those of which I showed two portraits illustrating single patch lupus occurring on the cheeks of healthy persons, characterised by a thick growth of apple-jelly, and by the entire absence of any surrounding inflammation. These cases would be very suitable ones in which to test the power of the fluid in attacking the lupus growth itself; and from what I have seen thus far I quite expect that they would escape its influence. In the more rare forms of lupus the remedy has not yet been tried. On lupus erythematosus, however, a good many experiments have been made. It was foretold by those who believe that what they call "true" lupus is bacillary, and that lupus erythematosus is not so, that the fluid would have no effect on the latter; and, in the main, this prognostication has been fulfilled. In a very marked case under my own care, and in which Dr. Heron was kind enough to carry out the treatment, the patient had good febrile reactions after repeated injections, but without any inflammation of her lupus patches. This remarkable result was perhaps explained by the supposition that the lady had tuberculosis of the lungs as well. She was, as is usual in lupus erythematosus, of a phthisical family, and she had herself been treated for suspicious symptoms. In her case, a week after we had abandoned the injections in the belief that they were doing no good, the erythematous patches on her face suddenly disappeared almost wholly. A number of discs on the upper part of her chest, however, some of which were so thick and definite that some observers were inclined to regard them as lupus vulgaris, remained wholly untouched. She had had nine or ten injections, and latterly in full doses. I have

seen this patient to-day, and her face patches are already returning to their first condition.

Apart from the question of its direct influence on the lupus itself, some collateral observations of much interest have been made as to the possible results from Koch's fluid. I am told that it has repeatedly caused general erythematous eruptions on the skin, and, in some, nodular effusions into the cellular tissue. In one case the inflammation of the lupus (on the face) passed into unquestionable erysipelas of a rather severe type, and the patient was for some time in danger. In two cases, at least, during the febrile reaction old chilblains became again inflamed.

If we are obliged to report that nothing that can be called a cure of lupus has yet been obtained in London practice, it may seem unnecessary to ask whether cures are lasting. On this point, too, however, I am sorry to say that some evidence is already forthcoming. I fear it is the fact that relapses occur very quickly. The patient who was taken to Berlin by Mr. Malcolm Morris and Dr. Pringle, and was for a time supposed to be almost cured, is now, I am assured by both the gentlemen concerned, in a condition almost as bad as before the treatment.

If, on the whole, we are obliged to return a qualified verdict as regards this method of treatment in London, it by no means follows that it may not in the future be put to some use. On the contrary, it has in many cases done very great good, and no one can doubt that the fluid possesses very remarkable powers. It may be that in the future we shall learn to combine the older methods of destruction of the lupus deposit by means of cautery or caustic, with suppression of the attendant inflammation by injections. What I have seen would certainly lead to the belief that some patients are by the injections brought into a condition much more favourable for surgical treatment than they were before. The ill effects of the treatment on the general health, although obvious and considerable for a time, seem to pass away. No one has reported to me any instance of permanent damage. I may confess that nothing which I have seen leads me to be hopeful that very prolonged periods of treatment will avail more than short ones. If febrile reaction has ceased to occur, I do not think that there is any further hope that the lupus nodules will be attacked. On this point, however, as well as on many others, we need further experience. Amongst those to whom I have been most indebted for the facts upon which the preceding statements are based are Dr. Heron, Mr. Watson Cheyne, Mr. Waren Tay, Dr. Gayton, Dr. Radcliffe Crocker, Dr. Pringle, Mr. Malcolm Morris, Dr. Colcott Fox, Dr. Abraham, and Mr. James Startin. To these gentlemen you and I are alike indebted for the opportunities they have afforded us for seeing their cases this afternoon. For myself I cannot sufficiently express my sense of the compliment they have paid me in placing their facts at my disposal and giving me leave to make my own criticisms. I hope that I have not been premature in expressing the opinions which I have done. If I have spoken with less enthusiasm of the results of Koch's treatment of lupus than it really deserves, I can only say that it will give me great pleasure in the future to change my opinions. By the kind permission of the two Colleges we shall meet in this well-lighted and beautiful theatre every Tuesday afternoon for the next five weeks. On any of these lecture days cases illustrating Koch's treatment of lupus will be welcome by whomsoever they may be sent, and those will be most welcome, which come nearest to demonstrating completeness of cure. It is only by combined effort and by the public examination of the facts that satisfactory conclusions can be reached. Although, as you know, these lectures are not in any way under the sanction of the Colleges, nor does their committee of management incur any responsibility in connexion with them, yet I feel sure that this use of the theatre which they so liberally allow us to occupy is in entire consonance with its original destination. We are doing our best to elucidate one of the most important pathological questions of the day.

WEST CORNWALL INFIRMARY.—Mr. T. Bedford Bolitho, M.P., has forwarded to the West Cornwall Infirmary a scheme for a convalescent home in memory of his late father, Mr. Edward Bolitho. He proposes a first endowment of £10,000 for eight beds, and more money will be available to render thoroughly useful the proposed home.

A Lecture
ON
DEVELOPMENT OF MODERN IDEAS ON PREVENTIVE, PROTECTIVE, AND CURATIVE TREATMENT OF BACTERIAL DISEASES, AND ON IMMUNITY OR REFRACTORINESS TO DISEASE.[1]

BY SHERIDAN DELÉPINE, M.B. EDIN.

GENTLEMEN,—The intense excitement and the unbounded hopes created by the announcement that a cure for consumption has at last been found have led me to lecture to-day on a subject which I generally relegate to the end of my course of pathology. For, after discussing the various phenomena which are brought about by disease, and attempting to connect these phenomena with their cause, apparent or real, it is natural to try to explain why these causes do not always bring about the results which are observed only in a certain percentage of cases.

Effects of individuality, age, sex, family, race, species.—It is a matter of common experience that in times of epidemics persons equally exposed to infection are not all affected. The weak members of the community are generally more readily affected than the strong ones, the starved than the well fed, the intemperate than the temperate, the fearful than the fearless; but, apart from these often doubtful distinctions, some other influences must be at work in helping some to resist, for many a man or woman of weak constitution has been able to pass through plagues that had carried away more than one of powerful frame. This resistance of some individuals to disease has probably at all times attracted the attention of men, and very early in the history of civilisation observations have been made which by gradual extension have led to some of the most striking triumphs of medicine. It will be my object in this lecture to show you how immunity to disease, at first supposed to be due to individual peculiarities or supernatural influences, has gradually become connected with certain external circumstances acting directly or indirectly. Among the factors which are generally discussed in medical books as influencing the liability or immunity of certain individuals to disease I may mention age, sex, family, and race. These, as far as we can see at the present time, have an influence on the occurrence of disease which is in many instances difficult to explain. Some facts, however, tend now and again to lighten our ignorance, and to show that even these apparently inherent qualities are perhaps the result of the transmission of acquired properties through generations of cells or of individuals. This will be more evident perhaps if, by extending our field of observation from one to several kinds, we consider how the immunity of certain species, orders, or even classes of animals is brought about. Take, for instance, the remarkable immunity of the fowl and of the frog to anthrax. At first sight it seems impossible to understand why a small animal like a frog or a fowl should be able to resist a disease that is so rapidly fatal to such large animals as the sheep, man, or even the ox. Pasteur, however, more than twelve years ago recognised that the difference of the body temperature of the various animals was enough to affect the development of the parasite. He immersed a fowl for two days in water, bringing the temperature down to 28° C., and showed that the fowl was as liable to anthrax as any other animal. A similar observation was made later on by another observer, who by raising the temperature of a frog rendered it also liable to the disease. Thus it was demonstrated that certain conditions of temperature were necessary for the anthrax bacillus to attain its full virulence. What temperature does in these cases chemical products, special to certain animals, can also bring about in others. This is well proved by the influence of various culture media on the growth of micro-organisms. The presence of chemical compounds of well-known nature, even in very small quantities, has been shown by a great many observers to influence much the mode of growth of bacteria. It has

[1] A lecture delivered at St. George's Hospital on Nov. 20th, on the occasion of the publication of Koch's method for the cure of tuberculosis.

even been proved that bouillon obtained from the muscular tissue of various animals, notwithstanding the absence of any very definite active chemical compound causing marked difference, gave cultivation media more or less suitable for the growth of certain organisms. I will only mention out of a large number of other observations the very recent experiments of Hippolyte Martin on the bacillus tuberculosis. This observer found that animals can be classified roughly in the following way, according to the ease with which the bacillus grows in bouillon made with their tissues: herring, oyster, mussel, monkey, horse, calf, rabbit, birds, dog, cat, rat. It would be difficult in the present state of our knowledge to ascribe these differences to the presence of any definite compound, yet it cannot be doubted that they are due to certain physico-chemical properties. We have thus distinct evidence of marked differences between animals of different classes, orders, and species; and if we admit the truth of the doctrine of evolution, we must admit that such differences are in great part the result of the influence of external circumstances. We might infer from this that differences between animals of the same species, but of different races, families, sex, or age, are likewise the result of similar influences; we have, however, better evidences than these in support of the view that either extreme liability or immunity to disease may be acquired. Indeed, I shall be able to show you that it is the gradual development of that knowledge which has prepared men for the reception of Pasteur's discoveries, and of their recent momentous extension by Koch.

1. *Refractory state resulting from a first attack of certain fevers.*—It was very early recognised that after a first attack of many infectious fevers, such as small-pox, measles, typhus fever, &c., a second attack seldom occurred. This fact seems to have been observed more specially in connexion with small-pox, or at any rate to have led to practical application first in connexion with that disease. We learn that the *inducement of a first attack of small-pox* was an antique practice in Africa, Persia, and China, and that the method of inoculation was brought from there to Constantinople in 1673, and from that town to England by Lady Mary Wortley Montagu. The idea was evidently to produce a mild attack of the disease in individuals placed under circumstances most favourable to recovery in order to induce immunity. The practice, although open to serious objections, must have had no little success, and was much resorted to in the middle of the last century. Another practice which is not so rare as one might be inclined to believe is the *inducement of measles.* Many people are under the impression that unless children have had all the ordinary exanthematous fevers it is almost desirable that an opportunity should occur for them to have mild attacks of these fevers, and I have known of instances in which, one out of several children being attacked with measles, no attempt has been made to isolate the sick child, for, it was argued, it was as well for the other children to have the fever also and be done with it as soon as possible. Since this has been done under the influence of a popular belief, I think I am justified in suspecting that the practice of inducing measles for protective purposes is far from uncommon, although not generally carried out by professional men. Boeck and Sperino introduced about 1854 the practice of *syphilisation*, and these authors recognise clearly that this method is not only a prophylactic, but also a truly therapeutical one. The inducement of a certain disease in order to prevent its recurrence, and even to modify the course of an attack, was therefore a method early recognised in this century both in connexion with small-pox and syphilis.

2. *Refractory state produced by inoculation of an allied disease less fatal, or of the disease modified by passage through another animal.*—Certain country people had early suspected that a disease affecting cows was communicable to man, and that individuals thus affected were not so liable as other people to small-pox. History tells us that an English farmer and a German schoolmaster in the course of the last century, under the influence of that belief, had resorted to inoculation of that cow disease in preference to the inoculation of true variola. Jenner was the first medical man who discovered the immense importance of these traditional beliefs and practices, and after devoting all his energy to the study of the subject became so convinced of the value of the method of vaccination that after a long struggle he has succeeded in convincing others, and has become thus one of the greatest benefactors of the human race. From 1798—when Jenner brought vaccination before the world—up to 1880 very little was done to extend the scope of the principle thus discovered. Then Pasteur arose, who, after studying for many years the nature of the virus causing several diseases, became gradually convinced that this virus may become intensified or attenuated at will, and in 1880 was able to state positively that the production of an attack of definite intensity of many infectious diseases was a thing not only possible, but also practicable and capable of application for the prevention of disease. In 1880, also, Burdon Sanderson suggested that the attenuation of the virus of anthrax for the purpose of vaccination might be obtained by using the guinea-pig as an intermediate host. Greenfield experimented also at the same time and in the same direction with very satisfactory results. In 1883, Pasteur and Thuillier made experiments in the *rouget des porcs*, showing clearly that by causing the virus to pass through a series of pigeons it became gradually more virulent for the pig; whilst the reverse was true when series of rabbits were used as intermediates, showing thus at the same time how disease may originate or be modified. The principle of vaccination as introduced by Jenner seemed therefore to have become a fact capable of general application by this time. All that seemed necessary was to find a suitable intermediate host for the parasite. By growing the parasite in a series of such intermediate animals one was able to obtain a "vaccine" or "lymph," which, like that of vaccinia, was capable of inducing immunity, as well as an attack of the unmitigated disease would have, but without the same danger. Another fact of great importance has also been noticed by several observers—viz., that the occurrence of certain febrile affections may modify the course of other febrile affections previously established. Daniellsen and Boeck were perhaps the first to notice this fact, and to record the beneficial influence which an attack of small-pox might have on the course of tubercular leprosy. I need not refer to the numerous attempts which have been made since in that line.

3. *Refractory state produced by inoculation of a virus modified by cultivation outside the body.*—Another discovery, more fertile in results, although similar in principle, was, however, made known by Pasteur in 1880. He showed that by cultivating the microbe causing chicken cholera at a temperature of 33°, with free access of oxygen, he could obtain in from two to eight months an attenuated virus, which would cause the disease in a form mild, but sufficient to produce immunity. Toussaint and Chauveau were experimenting at the same time on the anthracis bacillus. Toussaint made the important discovery that by heating cultivations of the bacillus anthracis rapidly to a comparatively high temperature its virulence was attenuated. In 1881 Pasteur produced attenuation of virulence of the bacillus anthracis by cultivation for nine days at a temperature of from 42° to 43° C., and produced immunity by vaccination with the modified virus. Koch, Gaffky, and Loeffler repeated Pasteur's experiment in 1884, confirmed his results, and extended them, differing from him only with regard to the influence which he attributed to oxygen. In 1882 Pasteur and Thuillier applied to the bacillus of "rouget" the same principle as that used in the case of the chicken cholera and splenic fever, and succeeded in attenuating that virus also. During the whole of this period Pasteur was occupied in trying to isolate the virus of rabies. Although he did not succeed in doing so, he discovered that the nervous tissues acquired in that disease virulent properties which indicated the presence in them of some unknown virus. Not being able to obtain the virus itself, Pasteur used the nervous tissue as he would have a nutrient medium, and having discovered the method of obtaining spinal cords having a constant virulence (fixed virus), he dealt with these cords in the same way as he would have with ordinary cultivations, and thus succeeded (1885) in attenuating the virus and being able to produce immunity by vaccination, as in the case of the other diseases. Many other methods have been proposed for attenuating the virulence of organisms than those introduced by Pasteur. We have already seen how Toussaint and Chauveau used rapid heating. Paul Bert showed that oxygen under high pressure (20 atmospheres) kills the bacillus anthracis. Toussaint, Chamberland, and Roux (1880–86) added dilute carbolic, chromic, and sulphuric acids to nutrient media for the same purpose. Klein (1888) used also very small quantities of corrosive sublimate for the same purpose. Arloing (1886) showed that bright sunlight has also an attenuating effect on cultivations in fluid media. It is

useless to go into the further developments of these methods, that of Pasteur being the only one which has had very extensive application as yet as far as man is concerned.

4. *Refractory state produced by the introduction into the system of definite chemical products resulting from the action of pathogenic organisms on cultivation media.*—Salmon and Smith (1883) seem to have been the first to realise the practical importance of the injection of the products of growth of organisms independently of the organisms themselves. They showed that the injection of cultivations of the microbe causing hog cholera produces the effects of attenuated virus after being sterilised by heat, at any rate in the case of pigeons. (It was, however, accepted before that time that micro-organisms generate products which are deadly to themselves and are capable of arresting their growth, a fact which has also long been known in connexion with fermentation organisms.) Pasteur very early showed also that filtered chicken cholera bouillon injected into a bird produced the symptoms of the disease, although no organism was present in the fluid. He showed also that the same is true of the blood of animals affected with anthrax.

In attempting to explain the effects of inoculation with spinal cord for rabies, Pasteur also alluded in 1885 to the probable existence of some chemical compound in the cords which he used for protective inoculation, and suspected that this compound was instrumental in bringing about immunity. It was only about 1887 that these facts and views acquired fresh significance by the work of Toussaint, Chauveau, Wooldridge, Chamberland, and Roux on anthrax, of Charrin on the pyocyanic bacillus disease, of Chamberland and Roux on acute septicæmia &c., of Brieger, Chantemesse, and Vidal on typhoid fever, of Roux on symptomatic anthrax, and of Roux and Yersin on diphtheria. In most of these experiments the material used for inoculation was the cultivation medium modified by the growth of the organism, and sterilised either by heat, by filtration, or by both methods. The work of Charrin, Woodhead, Cartwright, and Wood has also shown that protection may sometimes be obtained not only by injection of the products of the growth of the pathogenic organism itself, but also of some quite different ones (bacillus anthracis and bacillus of blue pus).

The products used were therefore of a very complex nature, and it was not known to what kind of compound they owed their property of conferring immunity. Roux and Yersin had in 1888 tried to prove that their chemical vaccine for diphtheria owed its properties to an albuminoid body allied to unorganised ferment, but this last supposition is not generally accepted, although not disproved. (In order to understand the origin of the following improvements it is important to remember that the work of Panum (1856), Gautier, and Selmi (1873) had revealed the production of very poisonous alkaloidal substances during putrefaction. The more accurate researches of Nencki, and still more of Brieger, demonstrated clearly the existence of an important class of poisonous alkaloids produced by the micro-organisms of putrefaction. Gautier (1881), on the other hand, was trying to prove that animal tissues are also capable of producing by their metabolism poisonous substances of allied nature. The experiments of Lauder Brunton and Sir Joseph Fayrer on cobra poison (1873) should be kept in mind in relation with this subject. It was soon found that, besides these poisonous albuminoids, other more or less poisonous products might be manufactured either by animal or vegetable cells; these products were found to belong to the ill-defined class of albumoses. I need only refer to the work of Weir Mitchell (1860) and Reichert on the albumoses of snake poison; of Sydney Martin on phytalbumoses—i.e., albumoses produced by vegetable cells, whether bacterial or others—an important work, which led him to infer later on that albumoses were products intermediate between the non-poisonous albuminous substances of the culture media and the most poisonous alkaloids. Büchner, Wooldridge, Hankin, and others were also discovering toxic albuminous substances in various fluids or tissues of the body, some of which were deadly to bacteria.) Returning now to preventive inoculation, we find that in 1889 Sydney Martin in London, and Hankin of Cambridge working in Koch's and Brieger's laboratories, had isolated from cultivations of the bacillus anthracis albumoses which were found by Hankin to produce immunity from the disease when injected into the body. Possibly under the influence of Hankin, *certainly later in the year*, the important researches of Fraenkel and Brieger on the toxalbumins of diphtheria, typhoid fever, cholera, tetanus, &c., were published. Thus, just as in the case of many remedies used for centuries in the shape of powders, extracts, decoctions, infusions, tinctures, &c., active principles have ultimately been discovered by chemists, *it was now found that out of the material used for the last ten years by Pasteur and his school, it was possible to isolate some active products of definite composition*, to which the lymphs or "vaccins" owe their prophylactic and curative properties. Such was the state of science when, in the course of last year, it was announced that Koch had found the means of curing phthisis by inoculation. All minds were to a certain extent prepared for such an announcement; yet the fact that one of the greatest scourges affecting human kind had at last come within the pale of treatment has created immense sensation. The little that is known of the treatment and of its effects seems to point clearly to the fact that Koch is using some of the chemical products which have just been discussed, and therefore there is good reason to expect that *a certain amount of success* will attend the method. The results of previous experimenters show, however, that it would be wrong to hope too much from a system which has always been attended with *a certain proportion of failures*.

I have carefully avoided in this *exposé* to enter into many details, some of which are of great importance, in order that you should be able to follow the main line of observations and thoughts which have led to the recent discovery. I will therefore not attempt to discuss on what basis vaccination, essentially prophylactic in principle, may become a curative method when the modified virus answers certain requirements. There is a very distinct connexion between these two methods of treatment.[2] It may, however, be interesting to consider for a moment the methods which the knowledge of pathogenic organisms has introduced in medicine.

These methods can be subdivided into three classes: (1) The preventive, (2) the protective, (3) the curative. They have all something in common, and yet they all differ, as will be seen in the following brief enumeration:—

1. The *preventive method* consists in *destroying or attenuating the cause*, or avoiding it in some way or other so that the body may remain unaffected. (*a*) The *antiseptic method* introduced by Lister is a good instance of the methods which aim at *destroying the cause* before it has acted. (*b*) *Residence* in high localities, *drainage*, &c., are instances of the methods by which the causes of disease may be so *attenuated or diluted* as to become harmless. (*c*) *Absolute cleanliness. Aseptic* methods are based on the possibility of avoiding certain causes entirely without destroying them.

2. *Protection* consists in so *modifying the possible host* so as to render it able to resist virulent parasites. This can be done either by (*a*) increasing its *strength* and activity, as by diet, warmth, functional activity, and other hygienic conditions (Wargunin); (*b*) rendering its tissues and fluids *unsuitable media* for the *growth* or *full development* of the parasite. *Inoculation* and *Jenner's vaccination* are good instances of that method, which has been further extended by Pasteur and others; (*c*) by establishing *tolerance* (Sewall, 1887).

3. The *curative methods* consist in *attenuating* or entirely destroying the virus causing the disease *after it has penetrated into the body.* (*a*) The *actual destruction of the parasite within its host* is apparently still a desideratum. (*b*) *Attenuation of the virulence* can be obtained by introducing into the blood and tissues some product either interfering with the full development of the parasite or modifying the tissues and fluids of the body so as to increase their resistance to the extension of the parasite or to its products. This seems to be the chief principle at the root of Pasteur's *vaccination* for hydrophobia, &c. (*c*) *Neutralising the physiological action of the virus by using its physiological antagonist.* Muscarin, for instance, may be antagonised by atropin. Lauder Brunton (1873) directed attention to the possibility of applying this principle to the treatment of cholera. (The same idea has been applied to the treatment of poisoning by snake venom. Wynter Blyth, 1877; Lacerda, 1881). (*d*) *Destroying and removing the substratum* or ground which has become contaminated by

[2] For explanation as to the mode of action of the products used in vaccination see Lauder Brunton's lectures on Chemical Structure and Physiological Action, especially Lecture II. (Brit. Med. Jour., vol. i. 1889, p. 1389).

the parasite. This is *apparently the view which Koch has taken of the action of his lymph.* The action of the product on the tissues is, however, of the *same kind as that of the substances used in some of the methods already mentioned,* but more intense, and Koch's views will probably have to be modified.

In this attempt to analyse the methods which have been proposed I have separated processes many of which may act concurrently. This is, however, of little consequence, for my object was less to give an account of any single method than to trace the development of the ideas which are at the basis of the treatment of bacterial diseases. In this way I hope I may have been able to show you how *science* prepares the way for the highest branches of the *art*—viz., *preventive, protective, and curative medicine.*

HODGKIN'S DISEASE; PYREXIA; SUDDEN DEATH, WITH COPIOUS SANGUINEOUS EFFUSION INTO THE LUNG.

BY HARRINGTON SAINSBURY, M.D., M.R.C.P.,
SENIOR ASSISTANT PHYSICIAN TO THE VICTORIA-PARK HOSPITAL FOR CHEST DISEASES; PHYSICIAN TO THE ROYAL FREE HOSPITAL.

THE following case is of interest on account of its somewhat puzzling nature during life, but more particularly on account of its very unusual mode of ending. The patient was admitted under Dr. Thorowgood, but she was subsequently seen by me during his absence; it is at his kind request that I place the case on record.

Annie A——, aged eighteen, single, a matchbox maker by occupation, was admitted into the Victoria-park Hospital on Aug. 7th, 1890. She complained of pain in the left hypochondrium and of weakness. She stated that she had been ill four weeks suffering from feverishness and weakness; for three days there had been headache; the bowels had been rather constipated during the whole period, acting some two to three times a week. There had been slight pain in the lower part of the abdomen; she had never vomited. On admission, there were a flushed face, hot skin, and dry glazed tongue, showing posteriorly a little fur. The temperature was 101·2°; pulse 114, and of low tension. The abdomen was normal in appearance, there was no tenderness, but the spleen projected one inch and a quarter below the costal margin. There were no symptoms pointing to the chest, neither cough nor expectoration, and the physical signs were negative for both heart and lungs. In the neck the glands were enlarged, especially on the right side in the supra-clavicular region; but they were not conspicuous, and, though the enlargement was decided, they were to be felt rather than seen. There was slight enlargement of the glands in the axillæ and in the right groin. The enlarged glands were hard, well-defined, and freely movable. The urine was acid; sp. gr. 1010, and free from albumen. In the absence of any definite symptoms—diarrhœa, spots, &c.,—but in the presence of the fever and the enlarged spleen, the patient was put on typhoid treatment, and, so far as the diet was concerned, this treatment was maintained for some time after it had become clear, from the temperature curve, that the case was not one of enteric fever. The patient was examined on several occasions up to the time of her death, which occurred quite suddenly and unexpectedly, but no fresh signs developed. On Aug. 14th the spleen showed slight increase in size, and some scybalous fæcal accumulation in the descending colon was noted. Throughout the bowels were rather constipated, and in the early stages glycerine enemata were required. On Sept. 12th the glands on the right side of the neck above the clavicle were larger. On the 20th the glands in the left infra-maxillary region were enlarged, but the spleen had diminished somewhat. On Oct. 1st the spleen was again somewhat larger. Death occurred on Oct. 2nd.

In the chest some creaking sounds were heard near the angle of the right scapula on Sept. 27th, and on Oct. 1st the note under the left clavicle was doubtfully impaired. On this date a systolic bruit was heard at the base of the heart. Nothing more definite was discovered in the chest. On the two occasions that the blood was examined it was found to contain 75 per cent. of the normal corpuscular richness and no excess of white cells. The amount of hæmoglobin was unfortunately not estimated. The temperature curve was very interesting. There was fever the whole of the eight weeks during which the patient was in hospital; it was, however, markedly remitting, the lowest records falling just above or just below 99° F. (98·8° and 98·6° were frequent records). On six occasions only did the curve touch 98·4° or dip just below it. The maximal temperatures were 102°, 101°, 100°; on two occasions 102·8° was reached. The remissions and exacerbations were very regular, the former taking place about 8 A.M., the latter between 8 and 12 P.M. The range of temperature was about 4° during the first week, about 3° during the second week, and about 2°, or a little over, during the third week. During the fourth week the temperature was at its lowest, and the pyrexia appeared to be gradually breaking up; but in the fifth week the range again increased, and it mounted still more during the following three weeks, averaging 3° to 4°. If to the hospital period we add the four weeks of feverishness, of which she gave the history on admission (she had been on milk diet for two weeks before admission), we have a total period of three months of pyrexia. In spite of this prolonged pyrexia, the patient did not seem seriously ill; so little, in fact, that it was thought well to allow her to get up to tea in the last days of September, and according to her own statement she felt better. On Oct. 1st the last examination was made, with practically negative results. The enlarged spleen and lymphatic glands were the only positive signs.

Mode of death.—At about 2.10 P.M. the patient went to sleep after dinner, and nothing unusual was noticed until 3.30 P.M., when the nurse's attention was directed to her. The head and neck were then rigid, and the eyes fixed in an upward direction. There was slight turgescence of the face; no cry was uttered. There was no evidence of blood in the mouth either immediately before or after death. Five sighing respirations took place, and death happened in about thirty seconds.

I unfortunately could not be present at the necropsy, but the following is the post-mortem record by Dr. Ruffer, the pathologist to the hospital:—Body emaciated; staining well marked; rigor mortis well marked. In the pericardium about half a pint of clear serum. The left lung adherent everywhere by white adhesions; soft over the greater part of the lung, but tough behind; at the back part the lung was torn during removal; the lower lobe filled with blood, which oozes from every pore, so that the whole lung looks like currant jelly; portions excised sink in water; the upper lobe normal; the bronchial glands not increased. The right lung normal, except at the base, where there has been a much less extensive but similar hæmorrhage to that on the left side; no adhesions on this side. The spleen red, 22 oz. in weight; no infarcts; its substance was highly coloured, but fairly hard. The retro-peritoneal glands larger than natural; some attain the size of a walnut. The liver 59 oz. in weight; smooth; tough. The kidneys very large, tough, and firm. The intestines healthy. The pancreas healthy.

Remarks.—As to diagnosis little need be said. It is true that in the first stage some hesitation as to the possibility of typhoid was felt, but this was abandoned later upon studying the temperature curve, and the pyrexia was referred to the enlarged lymphatic glands and spleen in the absence of any other lesion—the case being diagnosed as one of lymphadenoma or Hodgkin's disease. The temperature curve corresponded with the third or remittent type of pyrexia described by Gowers as occurring in lymphadenoma;[1] the other types met with, according to this authority, being the continuous and the alternating types. Pyrexia is of course not a necessary feature of the disease, but this case accords with Gowers' statement that there is fever in nearly all cases under twenty years of age. The absence of much pallor helped to mask the case, nor did the microscope give any very striking proofs of anæmia; the observations on this point were, however, too few to base any conclusions upon, and the hæmoglobin percentage was not estimated. We may, however, mention the fact, according to Gowers, that glandular enlargement may occur and advance before any signs of deficient blood formation present themselves. Real anæmia may be present even to the extent of a reduction of the red cells to 60 per cent., whilst the face is well coloured. The urine was not watched, but the note on admission records a specific gravity of 1010 and the absence of albumen. As to the mode of death, this is, I believe, very unusual. Gowers mentions hæmorrhage from the nose and mouth

[1] Reynolds' System of Medicine, vol. v.

as a cause of death in one case. Birch-Hirschfeld[2] writes of a tendency to profuse hæmorrhage from nose and mouth, but he gives no details. Coupland[3] mentions hæmorrhage as less common in lymphadenoma than in leukæmia and pernicious anæmia But I have not been able to come across a case quite similar to this. That the lungs should to a great extent fill with blood without the appearance of any blood in the mouth seems astonishing, and the only explanation for this, at all plausible, seems the suddenness with which death took place. I understand that at the necropsy the main bronchi did not show any blood in their lumen. Was it really a hæmorrhage or an acute sanguineous œdema? In either case the sudden death in association with this remarkable condition of lungs is surely worth recording.

Welbeck-street, W.

HÆMORRHOIDS.

CAN OPERATIVE INTERFERENCE BE AVOIDED BY EFFICIENT MEDICAL TREATMENT ADOPTED IN TIME?

BY W. R. THOMAS, M.D., M.R.C.P.,

LATE LECTURER ON MEDICINE, SHEFFIELD MEDICAL SCHOOL; CONSULTING PHYSICIAN TO THE SHEFFIELD PUBLIC HOSPITAL.

FOR many years I have felt very confident that the majority of cases of hæmorrhoids we meet with, some of which we treat with medicine, others by operation, are entirely preventable, and that many of those even which are far advanced can be cured by medical treatment alone, but it is necessary when treating them to give due consideration to all the causes, and to treat each one. I have found during the last few years, when I have met with a patient willing entirely to submit to medical treatment, that such treatment has always been a success; but unfortunately the majority of patients are self-indulgent, and quite wanting in perseverance; and in such cases treatment, because incomplete, is often a failure. In my remarks I refer to both internal and external hæmorrhoids, but more particularly to the internal. I select three out of the last sixty cases I have had to deal with as fair examples of all.

CASE 1.—A gentleman, aged forty, anæmic, great debility, functional cardiac symptoms, &c. He has suffered from internal hæmorrhoids for six years, with frequent hæmorrhage when at stool, the mass, when protruded, being the size of a small orange. Cause: sedentary life, laziness, constipation. Treatment: Daily walk insisted on, more vegetable food, friction to abdomen, white mixture or Æsculap in the morning when required, injections daily, local sponging. After three months' treatment he was quite well.

CASE 2.—This patient, a female, has had six children; very weak; hæmorrhoids for years, which now protrude at each evacuation and bleed, causing anæmia. Treatment: Daily walks, more vegetable food, white mixture when required, injections of lukewarm water at first, and then cold water, local applications of cold every morning. At the end of two months there was no protrusion at all when at stool; no local discomfort whatever; quite well.

CASE 3.—The patient, a male, aged forty-two, stout and florid, is a heavy drinker and eater. Liver and abdomen enlarged; he suffered from hæmorrhoids for the last four years; they protrude, bleed, and are about the size of a small orange. Hæmorrhoids always worse after drinking. Cause: Excess in eating and drinking, want of exercise, constipation. Treatment: Abstinence from drink, almost total; injections of cold water every morning. White mixture when required. Local applications of cold.

There are a number of factors which have to do with the production of hæmorrhoids which it would be well for us to remember, as it is only by considering each one which has helped to bring on the disease that we can hope to effect a cure. These are: the valveless condition of the portal veins, gravitation, obstruction owing to hepatic disease, obstruction from heart or lung disease, sedentary habits, excessive eating and drinking, straining from any cause, excessive obesity, and taking purgatives too frequently. Owing to the valveless condition of the veins, there is not any propulsion forwards from the contraction of the surrounding tissues, and a congested condition of the radicles of the portal veins is the result, giving rise, perhaps, ultimately to hæmorrhoids. Gravitation will tend to increase the size of the lowest veins. Obstructions from liver, heart, or lungs will have the same effect. Sedentary habits induce a diseased condition of the liver, with consequent obstruction to the passage of portal blood through it. The abdominal muscles do not, by their contractions, assist in propelling the contents of the intestines forwards, a constipated condition of bowels and dilated state of veins being thus produced. Excessive eating or drinking produces disease of the liver, obesity, and other injurious consequences. Straining at stool from any cause is a factor of importance; for the pressure brought to bear upon the intestines generally, by the abdominal muscles, diaphragm, and other muscles, tends to produce a very dilated condition of the lowest vessels, those of the rectum, which, often during the act of defecation, give way and hæmorrhage ensues. Excessive obesity aggravates, by its pressure, this tendency to congestion. Many people are in the habit of taking purgatives daily. They do not seem to appreciate, or to be aware of the fact, that ordinarily only a certain amount of fæcal matter, that which is in or near to the rectum, should be expelled daily; and that if, by taking purgatives, several feet of intestine be evacuated, proper purgation cannot be expected the next day; time must be allowed for reasonable accumulation, which will generally be a sufficient stimulus to the whole intestinal canal. Now when treating hæmorrhoids, I believe that if we take into consideration and treat each one of the several causes we shall often meet with most satisfactory results. Many of the recommendations appear to be trivial; but success very frequently follows attention to them, and operative treatment follows neglect of them.

Daily action of bowels.—Owing to hurry many sadly neglect the bowels, which act very irregularly. It is very important that they should be trained to act once a day from childhood, say, immediately after breakfast, and those who have paid proper attention to this rule but seldom require treatment. Sponging the anus and surrounding parts with soap and cold water is a very efficient application. Acrid fluids &c., which during the ensuing day would irritate the skin, are removed.

Diet &c.—In this country we, as a rule, eat far too much meat and too little vegetable food. I am confident that this habit has much to do with the costive state of bowels and the formation of hæmorrhoids. I have seen cases of hæmorrhoids with constipation cured by such attention alone, by taking apples or pears after breakfast, by increasing the quantity of cabbage, cauliflower, &c., taken with dinner and with luncheon, and by at the same time diminishing the amount of meat eaten.

Exercise.—I believe that this is a most important cause, and that if a reasonable amount of physical exertion were undergone by the nation generally, constipation and hæmorrhoids would very seldom require treatment, the liver would be well kneaded daily, inspissated bile would be propelled, and the action of the intestines would be assisted by the abdominal muscles.

Injections.—It is astonishing how much relief some patients obtain by an injection daily of as much water as can be retained for four or five minutes with comfort. I generally begin by recommending lukewarm water, but as soon as the patient can bear cold I order it. This seems to stimulate the whole bowel from above downwards, to act as a tonic on its interior by daily removing large masses which lodge in the rectum, to enable its walls to regain their elasticity and contractility, and by removing irritating secretions and pressure, to prevent hyperplasia of cellular tissue which accompanies a dilated condition of veins.

Alcohol.—Those who suffer from hæmorrhoids should, if possible, give up taking stimulants entirely; for they tend to produce a dilated condition of vessels everywhere, and by causing disease of the liver of an obstructive character give rise to dilatation of all the small branches of the vena porta, and those of the rectum suffer more than any.

I may here repeat what I have already said, that nearly all cases of hæmorrhoids, both internal and external, can be cured by proper, simple, rational medical treatment.

Bournemouth

[2] Ziemssen's Cyclopædia. [3] Fowler's Dictionary.

FIBROMATA OF THE NASO-PHARYNGEAL SPACE, THEIR SUCCESSFUL TREATMENT BY NEW METHODS.[1]

BY J. L. W. THUDICHUM, M.D., F.R.C.P. LOND.

THESE tumours of the naso-pharynx were formerly described as polypi, of which they represent the most severe forms. But they differ from tumours now commonly termed polypi in this, that if they are not removed by art they mostly lead to a fatal termination. Of the perniciousness of these tumours the literature of the subject contains ample evidence; death occurred most commonly by hæmorrhage, spontaneous, often repeated and long continued; some cases perished from the progress of the tumour to the base of the brain, others from suffocation, whatever was the temporary symptomatic relief—e.g., by tracheotomy. Not a few cases perished in or after the attempt to effect relief by surgical means; many perished of secondary effects succeeding an operation effective or attempted—pyæmia, pneumonia, anæmia, and other accidents. The second prominent peculiarity of the fibroma is its frequent recurrence after it has apparently been extirpated; an accident which necessitates periodical examination of such patients. The third peculiarity of these fibromata is that they occur in an active state, mainly in males below the years of manhood; they most frequently come under observation in fast growing lads, but are also observed in a quiescent state in older men, when from the history of the cases it can be ascertained that they were carried by the bearers from adolescence into manhood. They mostly become quiescent, at least as regards increase, after the age of twenty-one years or, physiologically speaking, after the completion of the structural development of the head and face. The tendency to hæmorrhage continues a few years longer, but ceases with the atrophy of the base of supply by pressure. The rate of growth of these tumours is quick, and is increased, as is also the tendency to hæmorrhages, when they are interfered with unsuccessfully. The tumours quickly send arms into the anterior nasal fossæ, the antrum and ethmoid, and sphenoid cavities; they appear under the zygomatic arches, or in the orbits, and produce blindness by pressure on the optic nerves.

The anatomical place from which the first growths which enlarge to these tumours mostly originate is probably the posterior end of the middle turbinated body, more rarely the pharyngeal rudimentary tonsil. The extraordinary hæmorrhage which takes place in most of these cases is not rarely the first symptom which tells the patient that there is something wrong in his pharynx. In some cases it was the only symptom observed by the medical attendants. Obstruction of the meati, or even of one of them, is not a necessary symptom of the early stage of the disease; on the contrary, tumours of considerable size may exist in the pharyngeal space without the breathing being notably interfered with, and without the voice being more than slightly altered. A frequent result of the existence of the tumour is ulceration, either on the tumour itself or on the mucous membrane. This simulates ozæna, and is sometimes mistaken for it. But in reality it is the almost constant cause of the hæmorrhages. Bleeding from mere congestion, so common in cases of polypi of the uterus or rectum, seems an exceptional sequence of nasal fibromata. The fibromata have a remarkable effect in this, that by mere pressure, with and without ulceration, they effect the absorption, without purulency or expulsion or sequestration of dead particles of bones adjacent to the nasal cavity. I have known the osseous palate underneath the tumour to be as soft and movable as the soft palate itself; I have seen it pressed down low into the mouth, and pulsate synchronously with the tumour in the nose. In such cases quick relief is required to prevent perforation with all its attendant evils. When the tumour is removed, the bone is again rather quickly restored; the thin bones, such as the papyraceous laminæ of the orbits are not restored, but supplanted by imperfect membranes. Sometimes all molar teeth are lost on the most affected side.

The pernicious fibroma effects a highly vascular adhesion to all parts of the mucous membrane with which it comes in contact. This adhesion becomes universal over its surface in contact, and results in the formation of a vascular layer, which is the source of all the fearful hæmorrhages as well during the progress of the disease as during any operation for its removal. The substance or body of the fibroma is remarkably free from bloodvessels of any kind. The mere touching of the adhesions with a blunt probe for the purpose of ascertaining the extent or firmness of the adhesion not rarely causes a rush of blood, for which it is difficult to suppose the lesion adequate. These hæmorrhages are the principal impediment which the surgeon meets with in his attempt to remove the tumours.

Surgical literature contains many descriptions of a great variety of operations which were instituted for the removal of these tumours. There is no possible anatomical direction which has not been taken to get at the root of the evil, and all are avowedly mainly modulated under the fear of hæmorrhage in front. One can easily see that the means chosen were desperate expedients applied to cases judged to be equally desperate. After the introduction of anæsthetics, during the last thirty years, a very common set of operations was the following. The first step was tracheotomy and the insertion of an inflated plug in the larynx. Next the nose was split up from tip to root, the nasal bones were broken aside, or temporarily or permanently severed. The tumour was then attacked with forceps, scissors, and knives, and the bleeding was from time to time diminished by actual cautery. In this way the nasal meati might be cleared roughly, but the pharyngeal part could not be reached. This was therefore attacked through the mouth; the soft palate was divided, and the tumour—or rather as much of it as would yield—was cut away with scissors and twisted with forceps until a tolerable passage was produced.

Of the cases attempted to be thus treated a number were left uncompleted owing to hæmorrhage; some operations were protracted, in the hope of excising the tumour, over fourteen days, one known to me over thirty days, during which time the slit nose was kept open. In fact, when John Bell described the operation as a "horrid scene from which most surgeons had to retire in confusion and dismay," he stated the bare truth. About a third of the patients succumb to anæmia; another third die from the immediate consequences—pneumonia and pyæmia; and about a third escape death after a long and complicated run of septicæmia. Of these many have relapses. Wutzer (of Bonn) had seventeen cases of relapse out of a total not stated. Nélaton added a special severity to the operation, with the intention of destroying the root, by removing permanently a portion of the osseous palate. Middeldorpf applied the electro-cautery to some such tumours, but he was confined to such as were pendulous and could be surrounded by the wire loop. For a tumour which filled the nostril entirely and adhered to a large surface he had no remedy. Moreover, he had no remedy for the profuse bleeding, which even the electro-cautery as commonly used allowed of in these cases. Even the monograph of Dr. H. Bensch, composed under the influence of the late Professor Voltolini, did not advance the subject, and its only novelty, a burner invented and depicted after the essay had been printed, "did not possess the advantages of the fundamental idea."

In my operations the electro-cautery is the operative tool by which the tumour is dissected, divided, cut out, and destroyed; at the same time, the bleeding is either prevented or arrested by the cautious injection into the bleeding adhesions of a concentrated solution of ferric chloride. The electro-cautery is employed in two forms—one the fork-burner, which cuts into the parts like the sharpest chisel; the other the electro-caustic loop, used white hot, as an écraseur. The styptic is injected with a small syringe, armed with a long hollow platinum needle, the point of which is guarded, so that it can penetrate only to a measured depth. My patients are ordinarily not placed under any general anæsthetic, but, solaced with cocaine, give an intelligent aid to the operator; but where desirable a general anæsthetic is easily applicable. There is no tracheotomy, no plugging of the larynx, no splitting of the soft or hard palate, no dividing of the nose, no breaking of the nasal bones, no resection of the nasal ramus of the upper maxillary. Almost the entire operation is performed through the nose, whatever may be diagnosed or introduced through the mouth. Consequently, this new operation makes the patients absolutely free from the fearful risks to which, as the statistics of results show, the

[1] Substance of a paper read before the West London Medico-Chirurgical Society.

former intrepid operation would make them liable. I adduce a few cases from private and hospital practice to bear out my general statement.

A young gentleman aged sixteen had his right meatus obstructed since June, 1885. Severe epistaxis set in, which confined the patient to bed during four months, when, in May, 1886, I saw him in consultation with Dr. Fyfe. I diagnosed a large bipartite choanal tumour, sending projections into both nasal canals, which were adherent throughout their course. When touched gently with the probe for diagnostic purposes the tumour bled profusely. I removed several pieces of the tumour, one of which was ulcerated, and effected a permanent passage for air. In June a serious hæmorrhage occurred, which was arrested by Dr. Fyfe by plugging. In consultation with Sir James Paget, it was decided to continue the operation by my method. This was done after the patient had recovered in October, 1886, when a large tumour was removed from the right nostril and choana by the electro-cautery. The patient continued well till April, 1887, when a slight relapse occurred, accompanied by bleeding. The anterior right turbinated was greatly swollen and adhered to the septum by fibrous union, while the choanæ were clear. Both anterior parts of the lower turbinated bodies were removed after discussion, and now a bleeding stump of the tumour could be seen; it was cut out, and found ulcerated and covered with a dry sanguineous crust. On July 7th, 1887, a movable piece of tumour, covered with dry blood, was cut off by electro-cautery; another in December, 1887. After this, with the aid of alterative and tonic treatment, the patient recovered perfectly. His breathing, articulation, and strength became perfect, and he is now a candidate for admission to the medical profession.

Another case, that of a lad aged seventeen, was sent to me from a midland town. An attempt had been made to operate upon the hard, large, bleeding tumour; the nose had been fissured all the way, but the bleeding became so appalling that the operation was arrested. Tamponade was applied, and the patient was discharged as hopelessly incurable. I removed piece after piece of the tumour through the right nostril, the enormous bleeding being arrested by the inflated obturator and ferric chloride injections. Now remained only the choanal pharyngeal part of the tumour of the size of a hen's egg. It was grown both to the soft palate and back of the pharynx; the soft palate stood perpendicular, and respiration was carried on noisily through a narrow round hole between the left base of the tongue and the tumour. There was evident dyspnœa. The choanal tumour was removed by the white-hot loop; the wire was passed through the mouth, both ends passing through the nostril were placed into the tubular carrier, and thus the adhesion to the soft palate was severed; in the same manner the adhesion to the back of the pharynx was severed, when the tumour was discharged through the mouth. The patient had a perfect passage, the septum which was preserved sprang back, and the patient could smell with the left nostril twenty-four hours after the operation. In 1889 the patient was perfectly well, and able to follow his business.

A case of this kind was sent to me from New Zealand, and after much correspondence between myself and the patient's guardians he arrived in London. But some relatives here disobeyed the guardians, and took him to a metropolitan hospital. There the patient died of the intrepid operation. I relate this case only because the hospital made me some amends for having taken this patient from me by leaving me another. When the surgeons attempted to operate in this case the hæmorrhage was such that as soon as feasible they got rid of the patient as incurable, and sent him home to die. He was received in the Queen's Jubilee Hospital, operated on and cured, and is now quite well. In this case no doubt the hæmorrhages were extraordinary, for the tumour was complicated with much destruction of the posterior part of the nose; the vomer and a piece of the sphenoid bone lay as dead sequestra in the middle of the tumour, and added fetor to the other tortures. The cartilaginous septum was saved, the exophthalmus disappeared, the arch of the palate, which was soft and depressed, resumed its place, grew bone, and became hard. The hearing of the right ear, which had been hard, and from which blood had been discharged for some hours, became restored. In this case the inner sphincter of the lacrymal duct was paralysed, for when the expanding obturator was applied to the nose to arrest bleeding the eye became filled with blood over the conjunctival space. The patient learned to prevent this by pressing his finger upon the sacculus lacrymalis before the application of the plug. In this case the right facial nerve was partly paralysed by pressure, and the expanded cheek was nearly motionless. After the operation it resumed its mimic contractility.

Another case was that of a clergyman in whom the tumour had existed for several years and produced much destruction. The nose was distended and thickened, the bony palate was soft and pulsating; all molars were lost from the right upper jaw. An abscess had burrowed from the ethmoid region through the orbit down the face in front of the antrum, and risen outside to the height of the zygomatic arch. In this case the first attempt at an operation produced much hæmorrhage; several subsequent bleedings, unconnected with any operation, were arrested. The tumour was gradually removed entirely; the patient has now for three years been quite well and able to follow his profession.

Another case is that of a merchant from the city of London. The anterior parts of the meati were closed by impassable hypertrophies, and enormous deviation of the septum to the left. The hypertrophies were removed with the electro-cautery, and the bones ablated; when these wounds had healed a large cyst was found in the posterior part of the left meatus, opened and removed. Only then the pharyngeal tumour presented itself, and was removed through the right nostril. In both cases respiration and phonation were completely restored.

In the case of a young gentleman aged sixteen, a pharyngeal tumour of the size of an egg was removed entire, as in the first case. I might quote a number of similar cases, all of which were cured by the operation here insisted upon, without a single death and without severe reaction. In some the tumour was cut in pieces in the pharyngeal space through the nose by a cutting instrument like a lithotrite, and removed in pieces through the nose with the wire loop. The operations are laborious, but their safety compensate for all drawbacks, and their hitherto invariable success is a great recommendation, particularly in those cases which were formerly left unoperated upon or declared incurable. In about a dozen cases abscission of the lower turbinated bones, of one or both sides, had to precede the final operation; but all patients were practically, most of them completely, cured, and are now active and useful members in various spheres of society.

Pembroke-gardens, W.

THE TREATMENT OF ACUTE LOBAR PNEUMONIA;

FROM AN ANALYSIS OF A THOUSAND CASES TREATED AT THE LONDON HOSPITAL BETWEEN THE YEARS 1880–1890.

BY W. SOLTAU FENWICK, M.D., B.S. LOND., &c.

THE treatment of acute lobar pneumonia has always proved an exceedingly discordant topic in the science of medicine. From time to time various new remedies have been strongly advocated, and their beneficial influence upon the course of the malady apparently demonstrated by an appeal to statistics. But each new departure has in its turn met with the same fate at the hands of further inquiry, with the result that the statistical literature upon the treatment of the disease is chiefly remarkable for its extraordinary contradictions, and for the opportunity it affords to modern writers for unanimity upon one point—namely, that no reliance whatever should be placed on statistics as a guide to the future treatment of the malady. But however just such a conclusion may be, a more extended inquiry into the etiology of acute pneumonia has gone far to demonstrate the cause of these paradoxical results; and it is now an appreciated fact that the disease in question varies in its clinical features, and consequently in its reaction to treatment, not only in different countries, but even in the various parts of the same land. And hence it is that the practice of venesection, combined with large doses of tartar emetic, although now totally condemned in the treatment of the malady as it occurs in large towns, still proves itself the most potent of all remedies when employed in that type of the disease which is commonly

met with in agricultural districts. It will therefore be admitted that, in order to form a just estimate of the influence of various remedies upon the progress of the disease, it is necessary that the cases submitted to observation should belong to the same clinical type. It may consequently prove of some interest to examine in detail the effects of various methods of treatment upon that class of the disease which presents itself in a metropolitan hospital, and accordingly I have collected the records of one thousand cases which have been treated at the London Hospital during the course of the last ten years. But before proceeding to the subject of my paper I must offer a few words of explanation upon the somewhat unusual method that has been adopted in the following analysis.

It is well known that some degree of fever is an almost invariable accompaniment of acute pneumonia; and since, as I shall have occasion to show, the danger to life during an attack of the disease bears a definite relation to the amount of fever which accompanies it, I have arranged the various cases according to the average degree of temperature which they presented. It may also be shown that those cases which present an average temperature of about 103° F. are usually attended with the minimum degree of mortality, the states of hyperpyrexia and apyrexia corresponding to the maximum of danger to life. I have accordingly drawn a line through this thermometric point, and by it divide the cases into two great classes, which, in default of better terms, I shall designate as "sthenic" and "asthenic." But it must be clearly understood that such a division is chiefly one of convenience, and that no attempt is made to determine whether any particular case should be styled "sthenic" or "asthenic" by a glance at its temperature chart. The main object of the analysis is to prove that the success of all treatment depends upon the individualisation of the patient instead of the disease from which he suffers. By thus arranging the various cases according to their average temperatures, I venture to think that several sources of error may be avoided, and that by examining the influence of the various remedies upon cases of approximately equal severity, we may arrive at a juster estimate of their relative value. The absolute duration of the disease is estimated by the length of time which elapsed between the initial rigor, or gastro-intestinal attack, and the first subnormal reading of the thermometer. The average duration of the malady, calculated in this way, was almost exactly eight days.

In order that a remedy may be able to exert its supposed influence upon the disease, a certain length of time must be allowed for its action. I have therefore included in my list only those cases in which the crisis occurred after the lapse of twenty-four hours from the time of admission into the hospital. On the other hand, more than one hundred cases were admitted during the same period of time, in which the disease terminated before the lapse of twenty-four hours, the patients having in all cases been previously nursed at home. No less than 49 per cent. of these cases terminated fatally, showing conclusively the high rate of mortality attending an expectant treatment when unaccompanied by proper nursing and attention. It is hardly necessary to state that all cases of so-called secondary pneumonia have been carefully distinguished from the primary or idiopathic form of the disease, and eliminated. Taking, in the first place, those cases which exhibited an average temperature exceeding 103° F., I shall proceed to examine them in the following order:—1. Cases in which the treatment consisted in the application of hot poultices to the chest, combined with the internal administration of various expectorant and tonic remedies. 2. Cases whose medicinal treatment consisted entirely of quinine in large doses. 3. Cases in which the disease was combated upon general antipyretic principles, similar to those employed in the treatment of other acute specific fevers.

CLASS I.—STHENIC CASES.

This group includes 502 cases, the treatment of which consisted in the administration of various medicinal remedies, while the local application took the form of hot fomentations or poultices. As I have already indicated, the cases have been arranged according to the average temperature observed during the course of the attack, the results being shown in the following way:—In 324 cases the average temperature ranged between 103° and 104°, and of these 60, or about 18·5 per cent., died. In 169 cases the average temperature ranged between 104° and 105°, and of these 51, or 30 per cent., died. In 16 cases the average temperature exceeded 105°, and of these 9, or 56·2 per cent., died. Without wishing to draw any exact conclusions from these figures, two facts are sufficiently obvious to allow of special mention—first, that the rate of mortality is a high one, and, secondly, that the death-rate increases with every degree in the average temperature. When, however, the clinical features of this group of cases are examined at greater detail, we are struck at once by several points of obvious interest, and a brief consideration of the most important of these may, perhaps, serve to throw a more concentrated degree of light upon the relative value of the various methods of treatment.

Death may occur at almost any time during the course of the illness, but it appears to be more apt to supervene at certain periods than at others. Thus, when the various cases are tabulated according to the day of the attack on which the case terminated, the proportion of deaths to recoveries is shown in the following way. Of the cases which terminated on the third day of the disease, 25 per cent. died; on the fourth day, 20 per cent. died; on the fifth day, 41 per cent. died; on the sixth day, 16 per cent. died; on the seventh day, 12 per cent. died; on the eighth day, 16 per cent. died; on the ninth, 32 per cent. died; on the tenth, 55 per cent. died; on the eleventh, 61 per cent. died; on the twelfth, 70 per cent. died; on the thirteenth, 84 per cent. died. But perhaps the most noticeable feature of all is, that among the entire number of 115 deaths, no fewer than 40 occurred at the crisis of the disease; in other words, 35 per cent. of all the deaths coincided in time with the sudden defervescence of the temperature. The following facts are, therefore, obvious from a perusal of these figures: first, that during an ordinary attack of acute pneumonia death is most apt to supervene about the fifth day—i.e., at the height of the fever; secondly, that after the eighth day the danger to life increases enormously with each day that the crisis is deferred; and thirdly, that the crisis itself is a period of very considerable danger. In the vast majority of cases some trace of albumen may be discovered in the urine before the third day of the disease. But I believe that the amount of albumen which can thus be demonstrated is in itself a point of very considerable prognostic value, and one which seems to have been much overlooked by systematic writers. I find that the quantity of albumen present in the urine during the first three days of the disease bears a definite relation to the attendant mortality. Thus, of cases which presented one-fourth of albumen, 32 per cent. died; of cases which presented one-third of albumen, 52 per cent. died; of cases which presented one-half or more albumen, 86 per cent. died. Again, in three cases death was directly attributable to pulmonary embolism; in each case the sudden dislodgment of clot being due to premature exertion on the part of the patient. In two cases the saphena vein was the seat of the thrombosis, while in the third the clot had evidently formed in the right ventricle of the heart. Another point of interest may be found in connexion with the initial symptom of the disease. In about 65 per cent. of all the cases a distinct history of an initial rigor was obtained; but in seventy-six cases the disease is distinctly stated to have commenced with a severe gastro-intestinal attack. Now the rate of mortality among those cases which commenced with a rigor was about 23 per cent.; but of the seventy-six cases alluded to where the disease was ushered in with severe vomiting and diarrhœa, no fewer than thirty-six died—i.e., nearly one-half.

There are only two other points to which I would here draw attention. Digitalis was administered in forty-three cases, and of these nineteen died. This extreme degree of mortality would appear to condemn the remedy outright, but it must be remembered that in these cases the heart was probably failing from the commencement, and it is well known that such cases are exceedingly prone to die, in spite of treatment. A preliminary venesection was practised in six cases, a fatal result supervening in five. Some form of alcohol was administered in 68 per cent. of all the cases.

CLASS II.—QUININE.

This drug appears to have been administered with the view of exerting some special influence upon the exciting cause of the disease, and I find that in fifty-two cases it constituted the entire medicinal treatment, in doses varying from twelve to forty grains daily. In thirty-two cases the average temperature varied between 103° and 104°, and of these six, or 19 per cent, died. In twenty cases the

average temperature varied between 104° and 105°, and of these five, or 25 per cent., died. Stimulants were administered in thirty-nine cases; nevertheless, two out of the eleven deaths occurred from collapse, when the fever suddenly defervesced at the crisis on the seventh day. From these facts it would appear that quinine, in the afore-mentioned doses, exerts but little beneficial influence in these cases; and after very careful examination of the various temperature charts, I have been unable to satisfy myself that the exhibition of the drug had tended in any way to modify the degree of fever. When these results are compared with those in the previous section, several points of similarity become apparent. In both cases the total death-rate exceeds 20 per cent.; under both methods of treatment the mortality bears a constant relation to the severity of the symptomatic fever; and both emphasise the same important fact—namely, that fatal failure of the heart at the crisis is of frequent occurrence, and results from the sudden withdrawal of the stimulating action of fever.

CLASS III.—ANTIPYRETIC TREATMENT.

I will now pass on to consider the results which have accrued from the application of general antipyretic principles to the treatment of acute pneumonia. And it might be well to explain at the outset that the object of these measures is to effect a reduction in the useless expenditure of cardiac force by annulling as far as possible the profligate influences of fever. The reduction of temperature may be brought about by the agency of two distinct classes of remedies—either by the administration of the various so-called antipyretic drugs (of whose mode of action we are still in ignorance), or by the employment of some method which can effect the reduction of temperature by the direct abstraction of heat. Unfortunately, I have only been able to discover ten cases among our clinical records in which the treatment of the disease was confided solely to such drugs as antipyrin and phenacetine. And since it is quite impossible to draw any practical deductions from an examination of so small a number of observations, I shall have to omit the consideration of this method of treatment, and confine the inquiry to the results which have attended the systematic efforts to control the symptom of fever by the direct abstraction of heat, and in so doing it may be well to commence at the beginning.

A. *The ice-bag.*—The local application of ice in cases of acute pneumonia has long been a favourite remedy with many continental physicians, and it is now some years since the ice-bag was introduced into the London Hospital as a substitute for the poultice in the treatment of cases belonging to the sthenic type. As in the case of every other innovation in the practice of medicine, many objections have been urged against the application of an ice-bag over the consolidated lung; and it would seem as if its most ardent advocates, by not insisting sufficiently upon the class of case in which the ice-bag can be used with success, and also, perhaps, by a tendency to somewhat overestimate the real value of the procedure, have unconsciously enabled these objections to exert an undue influence upon public opinion. I think, however, that everybody who has had much experience in the use of the method will admit the truth of the following statements:—First, that it is in the acute sthenic cases, and in these alone, that the ice-bag can be applied with any hope of success, and that those cases which belong to the secondary or asthenic variety of the disease are not only totally unfitted for, but actually affected injuriously by, its application. Secondly, that many patients exhibit a marked idiosyncrasy with respect to the local application of cold, and in these cases, however suitable they may appear, the ice-bag proves absolutely intolerable, and should therefore be at once removed. Lastly, when the individual peculiarities of each case has been inquired into and respected, the ice-bag proves itself of singular efficacy, and not only is the phantom failure of the heart conspicuous by its absence, but in the majority the heart's action becomes actually stronger, and the general condition of the patient undergoes considerable improvement. The antipyretic value of the ice-bag is uncertain. In the broncho-pneumonia of children a fall of temperature certainly does follow its use, but in cases of acute pneumonia I have never been able to detect any constant or decided effect as the result of its application.

Among my series of cases I can find only twenty-six in which the disease was treated solely upon this principle; for although a very large number of others received the ice-bag as a local application, the temperature was at the same time moderated by some accessory means. Of this number, eighteen exhibited an average temperature of from 103° to 104°, with two deaths; while in the remaining eight, the temperature of which exceeded 104°, two cases ended fatally. In no case did any bad symptom result from the use of the cold application. The value of the ice-bag (or Lieter's tubes) may therefore be summarised somewhat as follows:—As a local application in some sthenic cases it proves itself of more practical value than the linseed poultice, the pleuritic pain being relieved, while at the same time the general condition of the patient undergoes improvement. Its manipulation is simple, and by its lesser weight it does not tend to hamper the movements of the chest like the jacket poultice. As a general antipyretic remedy its value is inconsiderable. The mortality attending its use is probably lower than that which results from the previously described methods of treatment.

(To be concluded.)

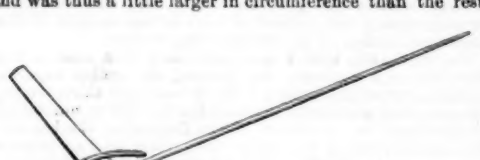
GASTROTOMY; REMOVAL FROM THE STOMACH OF A SKEWER WHICH HAD BEEN SWALLOWED, AND HAD PENETRATED THE THORACIC WALL; RECOVERY.

BY D. LOWSON, M.D.

THE mental vagaries of the insane often lead them to swallow, sometimes with suicidal intent, bodies entirely unsuitable for digestion or deglutition. Of these some are so irregular in shape that it is difficult to understand how they reach the stomach at all, and others so formidable in appearance that one wonders they are not immediately fatal. It is not an unusual thing at asylum autopsies to find in the stomach a miscellaneous collection of odds and ends, whose presence had been till then unsuspected. In a remarkable case, which I have seen recorded in more than one work on surgery, a couple of pounds' weight of such articles as nails, knife-handles, iron shoe heels, pebbles, screws, buttons, &c., was discovered for the first time post mortem. The motives influencing a diseased mind are often past finding out, but in such cases there is probably some local disease or neurosis, and in cramming things down the throat they are making an ignorant and impatient effort to relieve pain or satisfy a craving somewhat akin to that of early pregnancy. Suicide, however, is doubtless the intention in the majority. Certain things, of course, cannot be swallowed with impunity. A sharp instrument like a knife may be expected to prove fatal from hæmorrhage or visceral injury; metal palates have occasionally penetrated, the thoracic aorta; and even the swallowing of a coin, usually looked upon as a harmless accident, has been known to cause death, as in a case occurring some years ago in the practice of Mr. Rudd of Withernsea, where a halfpenny by becoming impacted in the ileo-cæcal opening caused complete and fatal obstruction. A sharp-pointed body like a skewer may, if directed upwards, enter lung or heart, or if downwards, may injure some viscus in the abdominal cavity. On the other hand, it may take a less perilous course and discover itself by penetrating the abdominal wall or the margin of the thoracic parietes, as in the following case:—

On Sept. 14th, 1886, I was summoned to a case at the Hull Borough Asylum. Dr. Merson, the medical superintendent, gave this history: "W. A——, aged thirty-seven, labourer, had previously to admission been for a number of years off and on an inmate of the Sculcoates Workhouse. Four months before coming to the asylum he had become more reserved and sullen, and latterly suicidal. A fortnight before admission he had tried to choke himself by cramming a handkerchief down his throat, on another occasion to push a poker down, and once he attempted to twist off his testicles. On admission, Sept. 2nd, 1886, he was rather thin and anæmic. His muscles were flabby, he had small boils on the back of his neck, and the epigastrium was reddened evidently from a blister. Heart and lungs were normal; pulse 58, regular and full; the breathing was somewhat rapid, otherwise normal; the tongue was flabby and covered with a moist brown fur, and the fauces were red and congested. He complained of pain

in the left side, and he manifested considerable sensitiveness when touched in that region, though the tenderness was not limited to one spot. There was neither sickness nor vomiting, nor any other symptom specially pointing to the stomach except an aversion to food, which he took in small quantity and after much pressing. He continued to complain of pain in the left side, but no abnormal appearance could be seen till four days after admission, when a small nodular prominence appeared under the seventh costal cartilage. It was painful when touched, and disappeared with a jerk on slight pressure. There was neither redness nor discolouration at this time, but later it became gradually more prominent and diffuse; redness began to appear around it, and abscess seemed to be forming. Poultices were now continuously applied, and on the evening of the 13th, a week after the local prominence was first observed, a small opening appeared in the centre, and the underlying tissue was apparently gangrenous. No foreign body was seen at this time, but next morning there projected from the opening an iron wire resembling a knitting needle, about six inches long. It could be pushed back and rotated to a certain extent, but could be pulled further out." I saw the patient in consultation with Dr. Merson on the same day, and found matters as above stated. A stiff iron wire protruded from the centre of a black slough between the seventh and eighth costal cartilages on the left side. It moved up and down with respiration, could be pushed back a little and rotated, but could not be withdrawn. As the cause of the obstacle to withdrawal was not apparent, and as there was no possibility of extracting from the patient any information on the point, no force was used. There was no pleurisy or peritonitis, so that it was evident that, whatever the thing was, its passage through the wall of the stomach and the other structures penetrated had set up sufficient adhesive inflammation to glue together the various layers and effectually prevent the escape of the contents of the stomach into the peritoneal and pleural cavities. Two modes of dealing with the case were advanced. One was to enlarge the opening and extract; the other to open the stomach through the peritoneal cavity and pull the wire back into the stomach, and then remove it through the abdominal wound. The first plan was rejected for two reasons. By enlarging the opening through which the rod projected we should certainly enter one serous cavity, perhaps both, and allow the gastric contents to escape, with the usual result; and in addition we had no knowledge of the magnitude of the obstruction at the other end, beyond the fact that it was small enough to pass the gullet. We therefore decided to open the stomach. An incision was made parallel to the left margin of the substernal triangle, and having divided the muscles and opened the peritoneum, I got hold of the anterior wall of the stomach, which, with a small piece of the great omentum, presented at the wound. Making an inch-long incision into the stomach, I introduced my finger, and behind the lower end of the sternum I felt the rod, and, attached to it, something resembling a handle. I hooked my finger round this and brought it out through the external incision, and with a slight amount of traction drew out the following: A skewer, 7½ in. long, with an oval eye, through which passed a fragment of a stem of a clay pipe, 2½ in. in length. One end of this had evidently been broken off close to the bowl, and was thus a little larger in circumference than the rest



of the stem. This, together with the oval shape of the eye of the skewer had prevented it from slipping quite through. I stitched up the wound in the stomach with Lembert's sutures, and closed the abdominal incision in the usual way.

Dr. Merson's report on the subsequent progress of the case may be summarised as follows:—The slough separated, and the wound looked clean and healthy on the fourth day. The abdominal wound healed in the greater part of its length by first intention, and was completely cicatrised on the sixteenth day. For nine days the patient was fed entirely by the rectum, and after the eleventh day by the mouth alone, the diet consisting at first of milk and beef and milk and egg. On the twentieth day solid food was resumed. The temperature on the evening after the operation was 100·2°; next morning 99·6°, evening 99·4°, after which it remained normal. The pulse was 98 on the first day, on the second 92 and 90, third 84 to 78, gradually falling to 64. The operation was performed on Sept. 14th, 1886, and the patient has remained until now in good health, and is still an inmate of the asylum.

It would be idle to speculate on the manœuvres and somersaults of the skewer and pipe stem during their sojourn in the stomach, or to attempt to estimate the probable number of failures before the latter accomplished its final and successful pass. The patient has always manifested an unwonted shyness, even when gently approached or questioned, with regard to the way in which the skewer was swallowed, and we have never been able to find out which end went first, or if the two articles were swallowed separately, or together as in the drawing.

Hull.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

KING'S COLLEGE HOSPITAL.

CASES OF ABDOMINAL COLOTOMY; REMARKS.

(Under the care of Professor ROSE.)

WE give below notes of four cases in which it was necessary to open the bowel and establish an artificial anus for the relief of symptoms due in three cases to the presence of new growth in the bowel, and in a fourth for acquired communication between the rectum and bladder. In these cases the operation was performed through the wall of the abdomen, a procedure which presented many advantages, especially in Cases 3 and 4. Mr. Rose draws attention in his remarks to points in the technique of the operation to which he attaches most importance. Various methods having the same object in common—that of drawing the loop of intestine well forward and preventing its retraction—have been suggested. Maydl[1] passes a hard rubber cylinder covered with iodoform gauze through an opening in the mesentery close to the bowel. Lauenstein[2] effects the same result by closing the abdominal wound by passing sutures through the meso-colon or mesentery, and secures the extremities of the loop by careful suturing. Allingham[3] recommends a ligature passed through the meso-colon or posterior border of the gut; and Verneuil[4] employs two large pins and resects two-thirds of the wall of the bowel protruding from the wound. Koenig[5] does the operation in a manner similar to that of Verneuil, but empties and closes the lower end before attaching the upper one to the wound. Kelsey's[6] method is somewhat like that of Verneuil. Cripps[7] secures the bowel by making two-thirds of the circumference of the exposed part project beyond the opening. For notes of these cases we are indebted to Mr. Cheatle, surgical registrar.

CASE 1.—W——, a gamekeeper aged sixty, was admitted under the care of Mr. Rose in January, 1890. A brother is said to have suffered from cancer of the lip. The patient stated that his health had always been good until about June, 1888, when he had a severe attack of diarrhœa and abdominal pains, the latter relieved by pressure, the attack lasting only a few days. Since then he had

[1] Sajous: Annual of the Universal Medical Sciences. Central. für Chir., 1888. [2] Ibid.
[3] Brit. Med. Jour., 1887. [4] La France Médicale, 1887.
[5] Medical Press and Circular, 1887.
[6] Med. Record, vol. ii. 1889. [7] Brit. Med. Jour., vol. i. 1880.

experienced general abdominal uneasiness and the passage at intervals of blood with his motions, the blood being bright red and clotted. No other definite symptom could be obtained. He complained on admission of dull, aching, abdominal pains, which were relieved by pressure of the hand firmly upon the abdomen; also of flatulence and weakness across the loins. The abdomen was distended and very resonant on percussion, especially over the region of the ascending and descending portions of the colon. Per rectum the finger could just reach an irregular constriction which encircled the gut, and the examination caused pain, which lasted for some time. He complained of severe pain during and after the passage of each stool, which was generally accompanied with much mucus and stained with blood. He passed six or seven loose motions a day. On Feb. 8th inguinal colotomy was performed as follows:—Taking an imaginary line from the umbilicus to the anterior superior iliac spine of the left side, an incision about four inches long was made at right angles to it, and about half an inch external to its centre. The abdominal wall, which was fairly free from fat, was then divided carefully, and the peritoneum opened to a corresponding extent. The small intestine presented at the wound and was pushed back. The omentum was now seen and followed to the stomach; this in its turn was pushed back and the transverse colon exposed and traced down to the descending colon and sigmoid flexure. A thread of catgut was then passed through one of its longitudinal bands at the spot selected for future fixation, and the whole returned into the abdominal cavity, the catgut acting as a guide. The parietal peritoneum was then stitched to the skin with a continuous fine catgut suture. The sigmoid flexure and lower part of the descending colon were then pulled out of the wound by gentle traction, the guiding thread indicating the required portion of bowel. A long piece of thick catgut threaded on a handled needle slightly curved was passed through the abdominal parietes about one inch from the outer edge of the centre of the wound, then through the meso-colon and abdominal parietes on the other side; the needle was then withdrawn, and the suture repassed parallel to, and about one-third of an inch from, the first, in an exactly similar manner. The effect of tightening up and tying this suture was to bring into apposition broad surfaces of parietal peritoneum with the meso-colic visceral layers, thus bringing the abdominal parietes well behind the protruded colon, and effectually preventing its return to the abdominal cavity. About six inches of the gut were thus allowed to protrude. At the upper and lower angles of the wound a few additional fine catgut sutures were introduced, fixing the gut to the edge as an additional precaution, with a view to prevent further protrusion. The wound was then dressed, the bowel being covered with purified oil-silk protective, and the whole by the double cyanide gauze and salicylic wool. The patient still continued to pass loose blood-stained motions per rectum until the sixth day, when the protruded colon was opened by a small incision; fæces were squeezed out, and the peristaltic action thus induced led to a copious evacuation. The patient passed no more stools per rectum, and was discharged on March 1st with his artificial aperture acting efficiently. There was little or no alteration in the condition of the growth to be detected on rectal examination. The patient was exhibited at the Medical Society of London on March 17th, 1890.

CASE 2.—J. W——, a female aged twenty-three, was admitted in May, 1890, suffering from vesico-vaginal and recto-vaginal fistulæ. When ten years old she was, as she describes it, "cut for stone." The wound did not heal, and the patient lost control over micturition, a condition which has since persisted. Three years later, according to her account, an abscess formed, probably in front of the rectum, which burst and left a fistulous communication, allowing the passage of fæces into the bladder. For this distressing condition many plastic operations had been attempted, without success. So finally Mr. Rose performed inguinal colotomy in the manner described above. The result is satisfactory on the whole, though the lower opening has given some trouble in consequence of the occasional passage of fæcal matter.

CASE 3.—C. L——, a compositor aged sixty-three, was admitted on Nov. 27th, 1890. On Nov. 10th, whilst standing at work, he was attacked with violent abdominal pain, which was relieved by pressure; there was no vomiting, collapse, or faintness. Was not lifting or doing any laborious work at the time. The pain passed off, and he was able to walk home. Vomiting commenced on Nov. 11th, after every meal; the material vomited was simply food, with no fæcal odour; this, however, soon subsided. No motion had been passed since Nov. 9th, when, as far as he was able to judge, the action was normal. No abdominal pain was felt after the first attack. The patient was thin and emaciated, but with no anxiety of countenance. He seemed very comfortable, lying on his back, with knees and hips extended. Abdominal respiration was present. Examination revealed no abdominal distension; no pain on manipulation; no dulness on percussion. The liver was symmetrically enlarged, painless. Per rectum a small nodule could be felt high up in front of the anterior wall, suggesting an enlarged gland. On Nov. 30th vomiting reappeared, and became fæcal in odour. Constipation throughout this time had been absolute, and resisted treatment by castor oil and copious enemata, and so without delay operation was decided on, and from the uncertain situation of disease median laparotomy was performed. A tumour was found involving the sigmoid flexure and the intestine above it. The transverse colon was drawn out of the wound and treated in the manner described above. The case, as far as the colotomy is concerned, is doing well, but the probable presence of secondary deposits in the liver and his general cachectic condition do not justify his leaving the hospital.

CASE 4.—Although this is not a true case of colotomy, for in consequence of the situation of the disease such was impossible, still it is included with the above as the method of operation was precisely the same. M. D——, a violinist aged fifty-two, was admitted on Dec. 1st, 1890. No history or symptom could be clearly obtained prior to Nov. 24th, when he was seized with violent pains in the right iliac region of the abdomen, which he stated were relieved by pressure; the pains increased gradually until Dec. 2nd. Vomiting (not fæcal) commenced early, and increased in frequency *pari passu* with the amount of pain. His last motion was on Nov. 23rd, which was, as far as he knows, normal. The man was thin and emaciated. The abdomen generally was slightly distended, no pain on percussion or manipulation; per rectum nothing could be detected. There was vomiting after food, together with complete constipation. On Dec. 2nd the abdominal distension had greatly increased, and as the vomiting, pain, and constipation still continued, Mr. Rose opened the abdomen in the right inguinal region, as the symptoms pointed to disease near the cæcum. On examination, the disease was found to affect the upper part of the ascending colon, so a portion of the small intestine was brought out and fixed. In consequence of the excessive distension of the abdomen, it was necessary to open the gut on the operating table, when a copious evacuation of fæcal material took place, care being taken to protect the wound from contamination. The patient's condition improved (vomiting and pain ceasing) up to Dec. 5th, when his respiration became rapid, temperature subnormal, and dulness was detected at the bases of the lungs. The chlorides in the urine were decreased. He died on Dec. 7th. At the post-mortem examination the bases of the lungs were solid, swollen, and red, and the pleuræ covered with much lymph, and in the area of inflammation were hæmorrhagic patches. The top of the ascending colon was surrounded by a ragged ulcer with hard and abrupt edges, which encroached upon the lumen of the bowel, and only permitted the insertion of the tip of the finger. The wound appeared perfectly healthy,

Remarks by Mr. ROSE.—The above cases, supplemented by others treated in a like manner elsewhere, have convinced me of the great advantage of the mesocolic or meso-sigmoid suture described above, and for the following reasons: the operation is simplified, less time is taken in its performance, the separation of the upper and lower openings is definite, and the tendency to retraction of the spur avoided, thus preventing the passage of fæces into the lower part of the gut, one of the great troubles after such operations. The deep suture should not be removed until it is considered that the adhesions are sufficiently firm. In one case, however, I left it in longer than necessary, and suppuration occurred along its track, though this fortunately subsided after removal of the suture. Unless urgent circumstances arise, as in Case 4, the opening in the bowel should not be made before the fifth or sixth day. The occasional use of opiates or morphia hypodermically is sometimes necessary, especially when there is a tendency to vomit.

BELFAST ROYAL HOSPITAL.

A CASE OF LIGATURE OF THE LEFT COMMON CAROTID ARTERY FOR HÆMORRHAGE; RECOVERY.

(Under the care of Dr. HENRY O'NEILL.)

ALTHOUGH it is some years since the operation described below was performed, it will be noted that the patient was recently seen in good health; and a record of cases where important surgical interference has been required, illustrating the effect locally and on the general state of health, is often desirable. Although it was considered advisable to ligature the common carotid artery for the arrest of the hæmorrhage, the surgeon secured later the ends of the vessels in the wound. The mortality after ligature of the common carotid for hæmorrhage has been somewhat high. Pilz gives 335 cases, with a mortality of 51 per cent.; Nunn's statistics gave a mortality of 50 per cent.; and those of Fischer a still higher death-rate, that of 66 per cent. During the American War, 81 out of 116 for whom this operation was performed died.[1] A case in almost every respect resembling this one, as regards position, character of wound, method of treatment, and result, was under the care of Dr. Geddings.

John C——, aged forty years, a pipe-maker, was admitted to the Belfast Royal Hospital, at 12.40 A.M., on Sept. 1st, 1885, suffering from an incised wound one inch and a half long and one inch deep, and about one inch below the lobule of the ear, and close behind the angle of the lower jaw on the left side. The patient on admission was pale and collapsed. No pulse could be felt at the wrist, and there was sighing respiration. It was reported that he had lost a great quantity of blood, but none was escaping from the wound on admission. On being placed in bed, however, a sudden gush of blood escaped, which was promptly arrested by Mr. Norman Smyth, resident pupil, who inserted his thumb into the wound, and pressing backwards, upwards, and inwards, effectually controlled the hæmorrhage until Dr. O'Neill arrived, who, on considering the position of the wound and the extensive hæmorrhage, decided upon ligaturing the common carotid artery and jugular vein on a level with the cricoid cartilage. This was successfully accomplished, as the hæmorrhage was controlled. The original wound was carefully examined and the divided ends of the external carotid artery and jugular vein were secured by forceps and ligatured; all hæmorrhage now ceased. Carbolised silk was used as ligatures, no sutures were used, and the wound was dusted over with iodoform, and a light gauze bandage applied. Considering the collapsed state of the patient, no anæsthetic was given. The patient was restless, thirsty, and occasionally delirious for the next two days. On the third day the temperature rose to 102° in the evening, and after the fifth day it was nearly always normal. From the third to the eighth day he perspired freely, causing sudamina over the chest and back. He complained of a severe pain over the whole left side of his head. The ligatures came away at various times up till the seventeenth day, when the ligature of the common carotid came away. He suffered from slight facial paralysis for almost four months. The wound healed by granulation. About six week after admission he was walking in the corridor of the hospital when he became chilly, and was suddenly seized with an attack of acute laryngitis, which caused such severe dyspnœa that it was feared tracheotomy would be required, but by prompt use of inhalation of steam and hot stupes to the neck and the administration of five grains of calomel, in a few hours he was free from danger.

Remarks.—When we consider the high mortality which is recorded after the ligature of the common carotid artery, this case ended satisfactorily, and notwithstanding the great loss of blood from a patient who had indulged freely in alcoholic stimulants for a long time previously to the accident. For the past four years and a half he has been able to perform his usual duties without a single unfavourable symptom. On Nov. 6th, 1890, he came under observation again, and Dr. O'Neill, who examined him then, found but little scarring to indicate the position of the former wound.

[1] Charleston Med. Journal, Sept. 1849.

Medical Societies.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

The Therapeutical Value of Venesection.

AN ordinary meeting of this Society was held on Jan. 27th, the President, Mr. Timothy Holmes, in the chair.

Dr. PYE-SMITH communicated a paper on the Therapeutical Value of Venesection, its indications and its limits. The writer recorded cases in which he had used bleeding from the arm, amounting to nearly fifty in number. The patients were suffering from bronchitis, acute and chronic broncho-pneumonia, lobar pneumonia, miliary tuberculosis of the lungs, valvular disease of the heart and pericarditis, Bright's disease, aneurysm, apoplexy and epilepsy. The general results were stated, and the remedy was then considered, not as one adapted for any single disease, but as useful in meeting certain indications of pathological states. These indications were stated as follows: First, cyanosis with distension of the right side of the heart, whether from pulmonary or from some other obstruction to the circulation; secondly, the intense pain of aortic aneurysm; and thirdly, uræmic and prolonged epileptic convulsions. The counterindications for bleeding were then considered, and criticism was offered of its use in fevers, in inflammatory disorders, in acute pneumonia, in hæmorrhage, and in apoplexy. An appendix of cases concluded the paper.

Dr. STEPHEN MACKENZIE thought that the time was ripe to reconsider the question of venesection. The pendulum of professional opinion with regard to it had swung from one extreme to the other. In many cases he had found it of great practical benefit, but its main use was in the first of the classes which Dr. Pye-Smith had mentioned—namely, in cases of over-distension of the right ventricle. In this dangerous condition, when the patient was in great peril, with blue lips and slow, feeble pulse, it did great good. In cases of heart disease it was often only of temporary benefit. In capillary bronchitis it gave great relief, and was sometimes curative; but it was in pneumonia that it often gave its best results. He quoted the case of a lady who was suffering from a very severe attack of pneumonia, with high temperature, rapid pulse and respiration, and cyanosis. Bleeding to twenty-six ounces proved of marked benefit. A second relapse was treated by leeching, which caused five ounces of blood to flow, and this did good, but, when bad symptoms returned for a third time, on the removal of twelve ounces of blood she rallied and recovered. He knew of a more extreme case, one of hæmoptysis, in which cyanosis was induced by the blood running down into the bronchi; in this also venesection was followed by recovery. The indications for its use might be generally stated to be venous congestion, with a struggling right ventricle. He had not used it for the pain of aneurysm, for he had found that iodide of potassium, amyl nitrite, or nitro-glycerine usually gave the relief required, and he referred to a case in which thirty grains of iodide entirely relieved the pain. He had bled many patients with uræmia, but the results were not encouraging. But the arterial tension in that case was produced by a toxic agent, and morphine, by acting as a chemical antidote, seemed to relieve it. Venesection in such cases he did not regard as the best mode of treatment, for it removed a minimum of the poison, and it took away blood which might be useful to the patient.

Sir GEORGE HUMPHRY said that his first experiences were at a time when bleeding was largely used, and he had lived to see it almost entirely forgotten. In his early days, when he was apprenticed, he used to bleed a great many people every week, especially in the spring and fall, to the advantage of his master and to no particular detriment to the patients. Many, indeed, came heavy and oppressed as if about to be ill, but they went away well; it therefore seemed to be valuable as a preventive measure. In those days they bled largely for inflammatory affections, especially for acute pleurisy, and he quoted two cases, in one of which recovery seemed to be due to this measure, while in another similar case in which it was not adopted a fatal result ensued. A small firm clot was held to confirm the necessity of bleeding, while if a large soft clot formed the indications were more doubtful. He asked how it was that one of the most important agents in the treatment of disease

should have so completely gone out of use, and he came to the conclusion that it was because it had been greatly overdone. Many other excellent remedies had similarly fallen into disuse because they had been applied too indiscriminately and too generally. The same thing happened with trephining, and might, he feared, happen also with antisepticism.

Dr. BROADBENT could name an additional reason why venesection had been abandoned, and that was that the human medical mind was always under the dominion of theory, and theoretically it had been decided to be a wrong practice. The battle was decided on the worst of fields—pneumonia; for it was only applicable in that affection in the first stage of the disease, when there was interference with the pulmonary circulation and embarrassment of the heart. He was brought up in an anti-venesection school, and later he saw it practised in Paris in cases of rheumatic and other fevers with disadvantage; but since he had been in practice there had not been a year of his life in which he had not performed it. He had employed it repeatedly in aneurysm, though he admitted that the free employment of iodide of potassium had now done away to a great extent with its necessity. In cases of right ventricular overdistension his experience had been good, and he had seen life saved in both mitral stenosis and mitral regurgitation. In bronchitis, when cyanosis was present, he had not formed a favourable opinion of it; he preferred an emetic in such cases, which freed the bronchial tubes and compressed the right side of the heart, giving that relief to the latter which was required to see the patient through the emergency. It should always be remembered that the right ventricle should be in a condition to profit by venesection—a strong powerful impulse with a small, almost imperceptible, irregular, short, low-tension pulse. In uræmia his experience of venesection had been almost uniformly favourable. He did not attribute that affection to the direct effects of a toxic agent, but rather to the secondary effects of the toxic agent upon the circulation, producing high tension, and hence it was that venesection relieved it. He had also bled in cases of high tension without uræmia with good results. He once tried to arrest an ingravescent apoplexy by venesection, but he could get no blood from the vein owing to the excessive peripheral spasm. In another case of uræmic dyspnœa with acute distension of the heart the same difficulty arose, though the patient got better under the use of nitro-glycerine.

Mr. HULKE said that he was brought up in a practice where the patients consisted largely of seafaring men or agricultural labourers, and he testified to the relief which he had seen follow in cases of broken ribs or pleurisy. Great good also had followed bleeding in cases of aneurysm, and it was of immense value in certain cases of head injury. He mentioned a case of the latter class in which the abstraction of more than a pint of blood entirely relieved a condition of cyanosis and convulsion.

Dr. BATEMAN had used venesection, but only in healthy people, for head injuries, and he gave the details of two cases in which a good result had followed this practice.

Mr. POLLOCK had always felt the great importance of bleeding in certain classes of surgical injuries, especially in chest cases where ribs were fractured and lung perforated, there being hæmoptysis and a condition of great distress. He quoted the case of a deformed cripple with such an injury, in whom immense relief followed the abstraction of blood from the arm. He regretted much that students nowadays were not taught how to bleed.

Mr. HUTCHINSON, in connexion with the subject of venesection, mentioned the fact that surgeons were constantly seeing patients who had lost much blood and who were apparently none the worse for it. He had found that iodide of potassium took the place of bleeding in cases of aneurysm, though one of the best specimens of cured aneurysm in the London Hospital Museum owed the result to repeated bleedings. He too had been born in the bleeding era, and had alternately renounced and recommended it. Latterly, he had found that a very simple measure gave all the advantage of venesection, and that was placing the patient's feet up to the knees in a bath of very hot water for a considerable period. This local determination of blood appeared to him to act just as efficiently as venesection in cases of head and chest injury.

Dr. ANGEL MONEY considered it inadvisable to bleed in cases of bronchitis with cyanosis in the very old and very young. He had seen relief follow dry-cupping, but particularly desired to recommend a plan of Dr. Barlow's, of rapidly applying an Esmarch's bandage to the lower extremities, and then, on removing it, a considerable congestion of the limbs would result, with relief to the patient.

Dr. ROBERT LEE said that there had been a great want of breadth of philosophy in dealing with this subject. Bleeding went out of fashion because common experience was against the practice of it, and common experience likewise must bring it in again if it ever were to be reinstated in favour. He hoped the whole subject would be worked out from the beginning, and he felt that in the arrest of local inflammation bleeding would again be resorted to with advantage.

Dr. BERRY said that general practitioners would, as a rule, be content to leave the lancet in the pocket of the consultant, who then might get the blame if any were incurred for its use. The only case in which he had performed the operation was for the purpose of demonstrating the fact of death.

Dr. PYE-SMITH, in reply, expressed his gratitude for the general support his views had received. It appeared to him that the time had come to say that a valuable weapon, if rightly used, had been thrown away. Everyone would be sorry if its revival were to lead to abuse. The indications were probably the recognition of the anatomical and physiological condition of the organs at the time venesection was proposed rather than the consideration of the pathology of the disease. Bleeding had been done in the cases of aneurysm in addition to treatment by iodide of potassium. The combined accumulation of experience would soon lead to the formation of an opinion as to the cases in which this measure was desirable. He had seen in Paris the pernicious consequences of bleeding in acute rheumatism and typhoid fever, and the error then was due to theory; if, however, we followed merely clinical experience, this error would be avoided.

CLINICAL SOCIETY OF LONDON.

Lupus successfully treated by Scarification.—Acromegaly.—Bilateral Adductor Spasm, with Unilateral Congenital Dislocation of Hip.—Congenital Cleft of Nose.—Cervical Swelling.—Enteric Fever (fatal) without Intestinal Ulceration.

AN ordinary meeting of the Society was held on Jan 23rd, the President, Sir Dyce Duckworth, being in the chair.

Dr. BALMANNO SQUIRE exhibited a case of Lupus which had recovered under treatment. The patient was a woman aged thirty-five; the disease had lasted twelve years, and she had remained well for seven years after the treatment ceased. The method adopted had been erasion and multiple linear scarification.

Mr. STEPHEN PAGET showed a case of Acromegaly. The patient was a man aged forty-two, in whom the disease had been in progress for ten years. There was extreme lengthening of the face, with overgrowth of the facial bones, especially the lower jaw. The hands and feet were greatly enlarged, and the patient had lost six inches in height by the advanced deformity of the spine. The thyroid was enlarged. Vision was defective. There were molluscous growths on the trunk, and osteophytes in the knee-joints. The voice was thick and guttural and there was loss of strength. Mr. Paget regretted that he had not yet been able to make detailed notes of the case, or to get the patient photographed. He showed photographs, lent by Sir William Turner, of a skull in the Edinburgh Museum.

Mr. RAYMOND JOHNSON showed a girl, aged eight, with bilateral adductor spasm of the lower extremities, associated with congenital dislocation of the right femur. The head of the femur lay forwards almost beneath the anterior superior iliac spine. There was a history of malpresentation at birth.

Mr. ARBUTHNOT LANE showed a case of unusual Congenital Cleft of the Nose in a male child.

Mr. W. G. SPENCER exhibited a boy aged eight, who had a swelling at the root of the neck on the right side of obscure nature, which it was proposed to puncture for the purpose of diagnosis.

Sir DYCE DUCKWORTH then delivered his inaugural address. After thanking the members for the honour done him in electing him President, he proceeded to refer to the duty of clinicians to cultivate the best methods of the clinical art. He undoubtedly was the best practitioner who saw most of disease, and had most to do with trying to

alleviate it. He referred to the pernicious and growing craving among the public for medical knowledge, and dwelt on the unwholesome practice of publishing pseudo-scientific articles by medical men in the lay journals. He then gave some illustrations showing how fluctuating were the waves of fashion with regard to remedies during his own medical life. When he was a student it was taught that brandy was a specific for all conditions of fever; and later, as a clinical clerk, he was told that mercury was of absolutely no benefit in the treatment of the lesions of syphilis. He next proceeded to refer to Dr. Koch's method of treating tuberculosis. He thought that that physician had been very unfairly pressed at first to disclose his research, for the work of bacteriologists, like that of philosophers, could not be hurried. A most unwholesome excitement had been fostered in the ranks of the medical profession, and an undue haste had been shown to carry out a plan of treatment not yet recommended for wide application by Koch himself. It would have been better to have waited till the results of his researches had been formally laid before the profession in the usual manner. After the publication of his recent communication, we could only regret that he had placed himself in an unprofessional position, and that he had been unwisely counselled to pursue a course which probably no one more than himself now more bitterly regretted. He regarded the practice of the Koch treatment at present as unwarrantable, and the time had not yet arrived for its general application. Referring to the bacillary theory of tuberculosis, he wondered what its position would be in ten years' time. With regard to the causation of tuberculosis, as of other diseases, it was of the highest importance to pay attention to the diatheses, to the tissue proclivities, of families and individuals. He next referred to the regrettable tendency on the part of many medical men to prescribe prepared chemical foods and medicines without adequate inquiry as to their composition and suitableness. He concluded with some remarks on the preparation for a medical career, expressing his sorrow at the present neglect of the study of botany, and advocating for general culture the study of the classical writings.

A vote of thanks to the President for his address was proposed by Sir Andrew Clark, seconded by Dr. Ord, and carried by acclamation.

Dr. SIDNEY PHILLIPS read a paper on two cases of Typhoid Fever fatal at a late period, without Intestinal Ulceration. The first case was a male, who, after fourteen days of illness with diarrhœa came into St. Mary's Hospital on Sept. 6th, 1890, with spots and other signs of typhoid fever. For some days there was nothing noteworthy in the course of the case, but on the 20th the temperature rose to 104·4°, the delirium greatly increased, and there appeared a copious eruption of many fresh spots; the tremor, already marked, became much more severe. On the 25th the signs of the typhoid state became marked, and the pulse-rate 150 a minute. There were never more, often less, than three stools daily, never any melæna. He died on Sept. 28th. The necropsy showed that Peyer's glands in the lower third of the ileum were in the stage of deposit, as well as the mesenteric glands. No ulceration existed anywhere in the intestine. The second patient, a male, came to St. Mary's Hospital after eight days' illness with typhoid fever. On Sept. 23rd, eight days after admission, spots were seen on the abdomen. Four days later the pyrexia increased to 104°, with commencing pneumonia of the right base. The signs soon became more marked, the patient sank into the typhoid state, and died on the fifteenth day after coming into hospital. Throughout the illness the tremor had been extreme; there was never diarrhœa nor melæna, but the stools were of typhoid character. The necropsy showed Peyer's glands in a stage of deposit, but no ulceration of the intestine; there was red hepatisation of the right lung. Dr. Phillips remarked that ulceration usually occurred in typhoid fever by the tenth day; the first patient died some time after the twenty-fourth, the second some time after the twenty-first day of the disease, but in neither case was there any ulceration of intestine. Since writing the paper, he had found a similar case was recorded in *La Semaine Médicale* of March last, and though there was always a presumption of ulceration after the tenth day, epidemics of typhoid fever varied in type, and these cases showed that ulceration might be long deferred and perhaps never present throughout the course of even a severe attack. Dr. Phillips also drew attention to the fact that though severe tremor in typhoid fever was usually regarded as associated with deep ulceration, it was not necessarily indicative of it, as the cases proved. The existence or non-existence of ulceration in any given case of typhoid fever was of great importance. These cases showed that it must not be taken for granted, either on account of the late stage the disease had attained, or on account of tremor, that ulceration was present; the signs more to be relied upon were melæna, excessive diarrhœa, and tympanites, and if these were absent there was no reason to abstain from aperients if otherwise indicated.—The PRESIDENT asked the author if he said that he was able to make a diagnosis and lay down definite rules for distinguishing between the presence and absence of ulceration in cases of typhoid fever, and if he proposed to treat these classes differently. He himself would prefer to give the patients the benefit of the doubt, and treat them all as if ulceration were present.—Dr. EWART said that among the cases which were labeled as enteric fever a certain number presented slight symptoms; a little fever, a few rose spots, and some tenderness in the iliac fossa. Such cases might mean nothing more than glandular reaction to enteric infection, and they would run a very mild and short course. The symptoms were due to nothing more than irritation from absorption of the poison. In other severer cases much of their gravity was due to auto-inoculation. He asked Dr. Phillips if the diagnosis of these cases had been placed on an unassailable footing, and if Ehrlich's reaction had been obtained.—Dr. KINGSTON FOWLER had never seen a fatal case of enteric fever without finding some ulceration of the intestine, but many cases of mild and abortive typhoid fever which recovered might not go on to ulceration. In treatment he would certainly be inclined to follow the rule the President had laid down, and not administer purgatives. He asked what measures had been taken to lower the temperature in the cases related. He himself had not seen the "typhoid state" for years, and thought its absence due to antipyretic treatment. He regarded abdominal symptoms as more valuable than tremor as indicative of deep ulceration.—Dr. GLOVER asked Dr. Fowler what special antipyretic measures he relied on to prevent the development of the "typhoid state."—Dr. FOWLER replied that he was speaking of general antipyretic means, such as cold bathing, the application of ice-bags, sponging with iced water, and the covering of the patient simply with a sheet. The drugs used had been antipyrin, antifebrin, and quinine.—Dr. SIDNEY PHILLIPS, in reply, defended the diagnosis of typhoid fever in these cases; the general symptoms during life and the enlargement of the agminate and mesenteric glands found after death were sufficient to establish it. Both his cases lasted more than fourteen days, and therefore could not be classed as abortive. As to treatment, they were sponged every hour when the temperature was high, and they were given quinine, as both antifebrin and antipyrin he regarded as unsatisfactory. He was not ready to formulate rules as to the administration of purgatives. Calomel might be highly injurious if ulceration was present, but what he wished to call attention to in the paper was that there might be little or no ulceration in cases where blood-poisoning symptoms threatened life; in such cases calomel might be the only means of saving it.

MEDICAL SOCIETY OF LONDON.

Adjourned Debate on Chronic Disease of the Uterine Appendages.

AN ordinary meeting of the Society was held on Jan. 26th, the President, Mr. Knowsley Thornton, in the chair.

The PRESIDENT, in reopening the debate, asked Dr. Duncan his reasons for selecting only the last thirty cases from his practice. Though statistical records were not of great value, because they did not show in individual cases the factors which led to success or failure, yet it was well to study the whole experience of any individual operator and to ascertain the amount of his failure before he attained fair success in operating. Whatever value might attach to the comparison of masses of statistics, a limited list such as that presented by the author was likely to give a false impression as to his practice and as to the dangers of these operations. He pointed out that these operations were not entitled to rank with ovariotomy for tumour, because tumour always killed if not removed, whereas a large proportion of these women would certainly not die and would most of them get well at the menopause.

He allowed, however, that there were many cases in which these operations of expediency might with justice be performed. He then proceeded to criticise the paper in detail. With regard to Case 6, he thought this should not be included in a list of chronic diseases of the uterine appendages, for it was an ordinary ovariotomy for dermoid tumour. He preferred to reverse the order of events as described by the author in the formation of cystic tubes, either hydro-, hæmato-, or pyo-salpinx. He thought that the narrow uterine orifice first became occluded, then morbid material escaped at the open peritoneal end, setting up adhesive peritonitis, and hence cystic dilatation of the closed tube followed. He doubted if cirrhosis of the ovary resulted from the pressure of adhesions, for such adhesions were often absent in cases of ovaritis in the course of the exanthemata. In the great majority of cases of what might be called "adhesion tumours" the ovaries were large, thickened, and œdematous. He thought that in most cases the cirrhosis preceded the adhesive peritonitis. The cases described by the author as congenitally ill developed were probably the result of acute disease during childhood, especially about puberty. In these cases he would avoid dilatation of the cervical canal, as likely to set up inflammation. Amenorrhœa he regarded as a more important symptom of diseased appendages than menorrhagia. Many cases which suffered from pain and menorrhagia would cure without surgery, but none, so far as he knew, with pain and amenorrhœa would do so, even if the appendages were removed. He differed from the statement that the pain was referred to the side most affected, his experience having been opposed to this. Personally, he had found, contrary to Dr. Duncan, that most cases with a palpable tumour presented a marked increase of flow, whereas it was by no means a constant symptom in the milder cases of chronic inflammation of the appendages. He agreed that rectal examination was very valuable, often more so than vaginal. The first finger in the vagina and the second in the rectum enabled most accurate knowledge to be arrived at as to the size, relations, and amount of fixity of a swelling. Anæsthesia as a rule should be avoided for the purpose of examination, for the following reasons: (1) Its own inherent risks; (2) the abolition of pain allowed examination to be pushed to dangerous lengths; and (3) the absence of the patient's sensations were a loss to the examiner in forming a correct opinion as to the need for operation. Sometimes, however, it might be necessary in a very neurotic patient. Though he did not deny the occasional existence of intermittent hydro- or pyo-salpinx, yet it was a very rare condition. It was often years, rather than months, before patients experienced the full benefits of these operations. In certain cases of tubal gestation waiting and watching was the only proper course, and he alluded to cases diagnosed as probably tubal gestation which recovered perfectly with rest and care. He found that ergot given in a bitter tonic mixture for long periods in combination with efficient hot douching was very valuable. Blistering and tampons did no good, and he saw no benefit likely to follow dilatation and electricity. He affirmed that the removal of the ovaries unsexed a woman and destroyed her sexual desires, basing his statement on the results of careful inquiry as to the after-history of his patients. He added that it was often extremely difficult to determine, even by the aid of the microscope, whether ovaries were diseased or not. He had only once failed to complete the operation for removal of the appendages, in consequence of the matting together of the parts. He thought it was unadvisable to tie the pedicle in three portions, as the middle loop was liable to be left loose. The transfixion should be made through the utero-ovarian ligament, using fine silk and tying slowly. He drained at present more frequently than he used to, but left the tube in a much shorter time. He had seen little good and much evil from flushing the peritoneal cavity, and he was glad to find he was not alone in his experience. He had discarded oiled silk as a dressing many years ago, preferring gauze next the wound. He had not had half a dozen cases of stitch-hole suppuration in his whole practice. He had seen so many cases recover from subsequent peritonitis without opening, and he had seen so much evil from interference in the acute stage, that in most cases he would adopt expectant treatment with opium and atropine. Passing to Mr. Doran's paper, he did not think massage was likely to be of service, but decidedly dangerous in many cases. He agreed with his remarks as to the absurdity of relying on the efficacy of electricity to destroy adhesions, open up closed tubes, and kill gonococci without damage to the individual; he preferred to leave catheterism of the tubes to abler manipulators than himself. Vaginal puncture had nothing to recommend it, and much to contraindicate its use. He thought drainage of a hydro-salpinx far more dangerous than salpingotomy, but mere separation of adhesions sometimes gave good results. Speaking generally, he would encourage these patients to lead a natural life, and not one of chronic invalidism. The curette might be useful in endometritis before the tubes and ovaries became involved, in which latter case its use must be very dangerous. Without thorough asepsis, the curette was more likely to set up disease in the appendages than cure it. He did not believe that the mental conditions and after-effects referred to by Mr. Doran were at all common. The disappointing continuance of pain which sometimes occurred after operation usually arose from inflammatory troubles resulting in adhesions, especially of the intestines, often due to imperfect asepsis. The artificial opening in salpingotomy would probably be closed within twenty-four hours. He thought that persistence of menstruation after these operations was due either to imperfect removal or to the presence of a supernumerary organ; his own experience of it was practically *nil*. Even after complete removal, however, periodic metrostaxes might occur from habit or irritation of nerves by ligatures. He never read a more absurd or misleading statement than the words of Dr. Mary Dixon, quoted by Mr. Tait with approval at a discussion at this Society in 1888, in reference to the operation for removal of the appendages: "It will save more lives than ovariotomy, because more need it." The diseases for which ovariotomy was performed always killed in time without operation; while the diseases for which the appendages were removed rarely killed, but in the vast majority of cases did not even shorten life, though they often rendered it very wretched. The two operations could not, therefore, be fairly compared. The views promulgated by many authorities as to the amount of sterility due to these chronic diseases of the appendages were exaggerated and misleading, and he said that both ovaries and tubes were too often removed when only one side was diseased. Many of the cases in which pain recurred on the other side were neurotic cases which should never have been touched at all, and of the others most were the result of bad surgery and of imperfect asepsis.

Dr. C. H. F. ROUTH said that in the epitome of cases which had been circulated nothing had been mentioned as to the previous treatment, and though the gynæcologists had been accused of setting up inflammation in these cases, yet they brought about many recoveries without removal of the tubes. He quoted a case of pyo-salpinx, in which the matter became consolidated, and later a collection formed on the other side. The latter burst in attempting removal, with a fatal result. He advocated puncture, followed by aspiration either per vaginam or per rectum, injecting the sac with iodine and draining. He had treated seven cases thus without a fatal result. The average age of Dr. Duncan's thirty cases was only twenty-seven; the lives of these women were saved, but they had been castrated, their matrimonial love and future desire for having children were gone, and this mutilation gave rise to a moral question which they were bound to consider. He confessed he looked with horror upon cases treated with this result which might have got better by other means. The same remark did not apply to clitoridectomy, which did not appear necessarily to destroy the sexual appetite. Salpingotomy, which had been performed successfully, might perhaps have been adopted in some of these cases. He quoted a case of gonorrhœa in which, on examination at about the third day, he felt the tubes to be swollen. Electricity was applied to the interior of the uterus, and the patient was cured.

Dr. HEYWOOD SMITH said that his own experience was in favour of menorrhagia, and not amenorrhœa, being the common accompaniment of ovarian disease. He frequently found the pain greatest on the opposite side, and this he thought might be accounted for by uterine displacement. He was surprised to hear the President say that he would wait in cases of tubal pregnancy, and he asked how long they should delay, and how, in case of delay, the patients got well. He found it was quite the exception for the sexual appetite to be lessened after removal of the appendages. In cases of sexual excitement, removal of the

clitoris was more likely to be curative than the appendages. As to the moral question, the important point was that the operation was done usually either to prolong life or to reduce the sufferings of the patient. Relief was a necessity to the poor, to enable them to earn their living. If a tube were removed, and the ovary left, he wondered what the effect would be as far as menstruation was concerned.

Mr. LAWSON TAIT was glad to find himself in the main in agreement with the author of the paper and with those who had spoken. He ridiculed the moral view of the question which Dr. Routh had put forward, and failed to see why an operator should be appealed to as a Christian to promote the development of the sexual faculties. In his own experience he had restored more sexual appetites than he had destroyed, and he could give numerous instances of patients who had led a single life before operation who had returned with cheerfulness to their marital duties afterwards. It was nonsense to say that a woman was ashamed to appear before mankind after her ovaries had been removed, and he believed that Dr. Routh would gladly make himself a eunuch if he suffered the pain endured by patients with ovarian disease. He was surprised to hear the President say that flushing did harm, for he was in the habit of using it most days of the week, and he had never had a mishap from it. The same remark applied to drainage. Sir Spencer Wells had said that the drainage-tube should be done away with, but he found it most valuable, especially in giving warning of the beginning of hæmorrhage. He kept it in a much shorter time than he used to—two or three days, instead of five or six. As to the Staffordshire knot, like other knots, it could not be tied with negligence. Once or twice he had failed with it, through not attending to his own directions for its use. It was not fair to say that the knot was not to be trusted; it was the man who tied it who was not to be trusted. Referring to the quotation of Dr. Mary Dixon, he called to mind the fact that at the time it was made there was great scepticism as to the very existence of pyo-salpinx, and Dr. Fowler's remarkable figures from the Middlesex Hospital records showed how fatal that disease was. Hence it was not unfair at that time to say that more women would be saved by removal of the appendages than by ovariotomy. Now, however, the fatality of this disease was not so great, because many cases were treated early. He was constantly protesting against the mixing up of cases which ought to be operated upon with those which should not, and because some of his critics were unable to recognise those which should be treated by operation they accused the operators of practising ignorant empiricism. He emphasised the essential difference between cases like those neurotic ones which demanded a guarded opinion and those cases of clear diagnosis in which operation was the only thing to save life, or at any rate to relieve suffering. In cases like those of menstrual epilepsy, where he had once removed the appendages he now hesitated to do so; but still, from recent experience, he was inclined to think that a vast field lay before them in these neurotic cases where operation might give relief. The gain at any rate would probably be greater than the evil, moral, Christian, or other, likely to result therefrom. Referring to the treatment of pyo-salpinx by electricity, he said it required a very robust faith to believe that this measure could cause pus to dry up. Let the advocates of it try a whitlow or a suppurative arthritis, where one could see and judge the result, before making assertions which could not be proved.

Dr. LEWERS said it was most important to inform ourselves as far as possible as to the natural course taken by cases of diseased Fallopian tubes when not operated on. He referred to a series of seventeen cases of dilated tubes which he had described in a paper read before the Obstetrical Society as bearing on this point. The late Dr. Matthews Duncan had commented on the comparatively advanced age of the patients in this series, and had argued that, as fifteen of the seventeen died from causes unconnected with disease of the Fallopian tube, it was probable that in many of the cases the disease had undergone a process of natural cure. Dr. Lewers believed this to be the true explanation. He considered, therefore, that a prolonged course of palliative treatment—one year and a half to two years—should precede operative interference. He commented on a case of ill-developed ovaries and uterus described in Dr. Duncan's paper. He could not agree that because the sound passed only two inches in a virgin of twenty the uterus was ill developed, as this measurement was the normal length of the uterine cavity in the virgin according to all standard authorities. The specimen of the appendages removed in this case had been shown, and he felt bound to say that as to size and all other obvious characters they, in his opinion, showed no abnormality.

Dr. AMAND ROUTH desired to emphasise the value of palliative treatment, and he quoted a case in which operation had been advised, but the patient's husband dying and sexual rest being thus gained, the patient got perfectly well. The measures he adopted were rest, administration of ergot, hot douches, and the occasional painting of the posterior cul-de-sac with strong iodine.

Dr. RUTHERFORD alluded to the paucity of cases of ovarian cysts in Dr. Duncan's list. In the case of ill-developed uterus with chronic dysmenorrhœa he thought the treatment by dilatation of the cervix would fail to relieve the patient.

Dr. CULLINGWORTH agreed in the main with the paper and the treatment. In speaking of chronic inflammation of the uterine appendages great importance should be attached to a history of recurrent attacks of peritonitis. As to preliminary palliative treatment, in many cases it was not at all desirable, and he certainly should not prolong it in the way Dr. Lewers had suggested. What could tonics and aperients do to cure a pyo-salpinx? Repeated blistering was an absolute barbarism, whether applied outside or inside. Hot vaginal douches were fashionable and did no harm, but they did no good. Glycerine tampons were mere child's-play. It was the rest in bed that did the good, and outside this no treatment other than surgical was of avail. A comparison of treatment by rest and by operation would be very fallacious, for rest constantly only temporarily alleviated a mischief which later broke out afresh. As to the proposition that adhesions should be separated and the parts not removed if normal, it should be remembered that a healthy looking tube might be full of pus. In cases of unilateral pyo-salpinx the opposite tube should be also removed, whether it looked healthy or not. He was open to conviction, but he did not at present countenance or teach that tubes or ovaries should be removed unless there was distinct evidence of gross physical lesion. He agreed with Mr. Tait as to drainage and flushing, and he concluded by stating his opinion of the absurdity of believing that curetting, so largely practised in France, could possibly cure tubal disease.

Dr. DUNCAN, in reply, was very glad to find that in the main the various speakers agreed with the views expressed in the paper. He said the thirty cases tabulated began some two years ago, from the date when the obstetric physicians at the Middlesex Hospital obtained the right to perform abdominal section. Prior to that date he had removed diseased appendages nine times, with one death from septic peritonitis. Since the last-published cases he had operated ten times, with, unfortunately, two deaths, the first from slipping of the pedicle ligature and fatal hæmorrhage, and here he emphasised the importance of tying the broad ligament in three places. He could not agree with the President that doing so was dangerous, and he meant in future, in those cases where the broad ligaments were bound down by old inflammation, to follow out this method, and trusted by doing so to eliminate one cause of death. The last death occurred a week ago, owing to a bit of the omentum getting strangulated, first in the drainage-tube, and then in the abdominal wound after the tube was removed. He still maintained that whenever tubal gestation was suspected an immediate operation was called for. He could not agree that dilatation of the cervix was attended by risk, provided the strictest antiseptic precautions were taken. He had never had any ill result. His experience was similar to that of Dr. Heywood Smith, who said that amenorrhœa was the exception and menorrhagia the rule in cases of diseased appendages. He was sorry to hear Dr. Routh advocating puncturing a pyo-salpinx per vaginam, as it was a most dangerous proceeding. He mentioned a case on which he intended performing abdominal section the following morning where a pyo-salpinx had been punctured two years ago, causing general peritonitis and not curing the disease. He did not think the operation of making an artificial ostium was of practical use, and he had no intention of performing it. He was sorry to hear Dr. Lewers recommending that these cases should be treated by an expectant treatment for eighteen months. Indeed, he was

in complete accord with the forcible remarks of Dr. Cullingworth, who insisted that the time mentioned in the paper (two months) was too long. He also quite agreed with the last speaker as to the frequency of recurrent attacks of pelvic peritonitis in the causation of chronic disease of the uterine appendages.

Mr. DORAN, in reply, said that it did not necessarily follow that adhesions would re-form after they had been broken down. The conditions under which they originally formed were unfavourable, but not so after the operation for breaking them down. Scraping out the uterus was useless and empirical in tubal disease. He much regretted the idle talk that had been indulged in with regard to the sexual condition after ablation of the appendages. He concluded by advocating delay rather than decision in dealing with cases of chronic disease of the appendages, just as, on the contrary, they should be decided and not dilatory in dealing with patients with ovarian tumour.

ROYAL ACADEMY OF MEDICINE, IRELAND.

A MEETING of the Obstetrical Section was held on Jan. 2nd, the President, S. R. Mason, in the chair.

Exhibitions.—Mr. M'ARDLE exhibited a subperitoneal fibroid tumour which had been removed from a patient aged thirty-two, and a ruptured ovarian cyst taken from a patient aged twenty-four. He also exhibited a large ovarian cyst. — Dr. W. J. SMYLY showed a large fibro-myoma which he had removed on account of hæmorrhage. The pedicle was treated extra-peritoneally, and the patient made a good recovery. He showed the tubes and ovaries removed for gonorrhœal salpingitis. There was extensive perimetritis, and the uterus was retroverted and adherent. The adhesions were broken down and the uterus was anteverted and stitched to the abdominal wall. The patient did well. An ovarian tumour removed in July. The patient had been suffering great agony. The tumour was found universally adherent, and the pedicle was twisted four times on its long axis. The patient made a good recovery.—Dr. MACAN showed a case of fibrous tumour removed from a patient who was sent up to Dr. Bennett for abdominal tumour. She had been two months married, and was about two months pregnant. The operation was not a difficult one, but the peritoneum became infected from the stump, and she died on the fifth day after operation.—Dr. MACAN read a paper on a case on which he had performed abdominal section three times, and removed an ovary each time. He then drew attention to the fact that a great many similar cases to this had been explained by a separation of one ovary into two parts by some constricting band, and that Professor Winckel, in his work on the "Diseases of Women," says that no case is absolutely proved to be one in which three ovaries are present unless the three ligaments of the ovaries are also found. As his case did not fulfil this condition, he was obliged to place it in the second class, where there was a greater or less probability of three ovaries being present. The chief points of interest in the case were: (1) The performance of laparotomy three times on the same patient; (2) the probability of three ovaries being present; (3) the occurrence of a hernia in the abdominal walls, which would, in any case, have called for operative interference.—Dr. F. KIDD thought that the title of the paper was based on an assumption—as no microscopical examination of the tumour had been made at the time—nor was any description given as to where or in what manner the pedicles of these various tumours had been ligatured with reference to their attachments to the uterus. Dr. Kidd was surprised that Dr. Macan did not find that there still remained two ovaries when he operated on the so-called ovarian tumour, as most operators adopted the precaution of examining the condition of the uterus and the ovary before closing the wound. Dr. Kidd believed that there never had been demonstrated the presence of a third testicle, and there was a great analogy between the testicle in the male and the ovary in the female.—Dr. HORNE wished to know if both Fallopian tubes had been removed, and thought the occurrence of menorrhagia subsequently to the removal of two ovarian tumours as very unique and difficult of explanation.—Dr. BAGOT said that Dr. Macan had stated that this was the first case in Ireland in which a third laparotomy had been performed. He thought that it must have escaped Dr. Macan's memory that he had previously performed a third laparotomy in the case in which he mentioned that he had operated for abscess of the bladder wall. As to the method of flap-splitting the abdominal walls in operating for hernia, he had seen patients operated on by this method by its orginator.

Fæcal Fistula.—Dr. W. J. SMYLY said this fistula was the result of coitus, and passed through the navicular fossa upwards and backwards into the rectum. The case was cured by dividing the perineum, and thus splitting flaps on the lateral walls and uniting them by continuous catgut suture. The accident is one of extreme rarity.—Dr. MASON said a patient had recently been in the Coombe Hospital who had been locked in a room by a man who had forcible connexion with her. She had lost an enormous quantity of blood, and when admitted to hospital the posterior fornix of the vagina was found to be torn transversely; the rectum was uninjured. She made a good recovery, the vagina being kept clean by frequent injections.

At a meeting of the Surgical Section on Dec. 12th, the President, H. C. Croly, occupied the chair.

Treatment of Lupus by Koch's Method.—Mr. THORNLEY STOKER exhibited two patients in whom lupus had been treated by Koch's method.

Operative Treatment of Sympathetic Ophthalmia.—Mr. STORY read a paper on operations on eyes blinded by sympathetic ophthalmitis, and gave the details of several cases operated on by various methods. His conclusions were that during active sympathetic inflammation no operation should be performed, and that after the subsidence of the inflammation the best operation was that proposed by the late Mr. Critchett, in which the lens capsule is divided by two cutting needles. If glaucoma occurs during active sympathy, and an operation is absolutely necessary, he would incise the cornea or sclerotic, but not do an iridectomy. His object was to call attention to the operation described in his paper, though the result could not be regarded as very satisfactory. No doubt, had the injured eye been removed in time there would not have been any occasion for an operation on the sympathising eye.

Transfusion and Intravenous Injection of Milk and Saline Fluid.—Dr. MELDON read a paper on this subject. Having reviewed the history of transfusion, he expressed his opinion that the evil results which have at times caused this operation to fall into disrepute have been occasioned by the employment of dissimilar blood. The author then narrated several successful cases of direct transfusion, as also one case saved by the injection of carbonate of ammonia and water.—The PRESIDENT, with reference to one of the cases, asked whether introducing the hand into an empty uterus—if hæmorrhage was not going on—was not, in a case of collapse, a most dangerous proceeding. The late Alfred M'Clintock taught that if the placenta was retained with any symptom of collapse it was dangerous to introduce the hand into the empty uterus to remove it. He had himself been taught caution in an interesting case in which he was about to perform (with the late Dr. Robert M'Donnell's instrument) transfusion to save a woman's life. Her husband said he was willing to give some of his blood for the purpose; but having taken the precaution of examining him, the man proved to have valvular disease of the heart. In like manner, he should make sure that the kidneys were not diseased.—Dr. CRANNY said he had had experience of three cases of transfusion done by the late Dr. Robert M'Donnell for post-partum hæmorrhage. In two of them the result was perfectly successful, but the third patient died. There was an immediate increase in the volume of the pulse, and the general condition of the patient was so improved as to be noteworthy. It was a well-recognised principle that when there was bleeding from the uterus, and either a portion of the placenta or clots remaining inside, the uterus should be emptied; but if there was collapse at the moment the medical attendant should wait till the collapse was over. There would be no hæmorrhage during the momentary collapse, but if a piece of placenta were left in the uterus it would bleed.—Dr. MELDON, in reply, said he had injected saline fluid once, and on that occasion he had no time to obtain any other than what he carried to make the milk injection alkaline—namely, a ten-grain powder of carbonate of ammonia. He used Dr. M'Donnell's transfusion apparatus; but for the direct

transfusion he had Aveling's, substituting Dr. Robert M'Donnell's cannula for the ordinary one supplied. At each contraction of the ball he assumed that about half an ounce was injected.

INFIRMARY MEDICAL SUPERINTENDENTS' SOCIETY.

THE usual monthly meeting of this Society was held on Saturday, the 24th inst., at Camberwell Infirmary. Mr. Herbert Chabot exhibited two cases of Joint Disease in Children much improved by treatment. Also a well-marked case of Duchenne's Paralysis in a boy eleven years of age, and another of Jacksonian Epilepsy. A specimen of Aneurysm of the first part of the Arch of the Aorta extending backwards into the posterior mediastinum and rupturing into the pericardium was also shown. The members had an opportunity of inspecting the new block of infirmary buildings erected on the circular system, and the remainder of the afternoon was occupied in discussing matters relating to the improvement of infirmary administration.

Reviews and Notices of Books.

A Text-book of Animal Physiology for Students of Human and Comparative (Veterinary) Medicine and of General Biology. By WESLEY MILLS, M.A., M.D., L.R.C.P.Edg., Professor of Physiology in M'Gill University and the Veterinary College, Montreal. With more than 500 Illustrations. Pp. 700. London and New York: Appleton and Co.

IT is felt by some that in physiology, as in anatomy, the facts ascertained are too numerous for any student to retain in his memory, and that it is more important that he should obtain a good general view of the subject, a knowledge of principles rather than of details. It is, however, extremely difficult in physiology to single out those facts that are the most important, and still more to discard theory. What one teacher thinks important another passes lightly over. In most physiological treatises the coagulation of the blood is considered at great length. Here it is briefly treated, and we could imagine a student reading through the section devoted to it without noticing that the exudation of serum is a very remarkable feature of the process. The work commences with a description of the cell and the phenomena of karyokinesis. Examples are given, with short descriptions of the life-history of unicellular organisms and of the lower fungi, vorticella, and hydra.

An instructive comparison is drawn between the forms that belong to the organic and the inorganic worlds respectively, and we give a quotation from this to show that Professor Mills writes in an attractive manner: "A modern watch that keeps correct time must be regarded as a wonderful object; a marvellous triumph of human skill. That it has aroused the awe of savages and been mistaken for a living being is not surprising. ..... Now, however well constructed the watch may be, there are waste, wear, and tear, which will manifest themselves more and more, until finally the machine becomes worthless for the purpose of its construction. If this mechanism possessed the power of adapting from without foreign matter so as to construct it into steel and brass, and arrange this just where required, it would imitate a living organism; but this it cannot do, nor is its waste chemically different from its component metals; it does not break up brass and steel into something wholly different. In one particular it does closely resemble living things in that it gradually deteriorates, but the degradation of a living cell is the consequence of an actual change in its component parts, commonly a fatty degeneration. The one is a real transformation, the other mere wear. Had the watch the power to give rise to a new one like itself by any process, especially a process of division of itself into two parts, we should have a parallel with living forms; but the watch cannot even renew its own parts, much less give rise to a mechanism like itself. Here, then, is a manifest distinction between living and inanimate things. Suppose, further, that the watch was so constructed that after the lapse of a certain time it underwent a change in the inner machinery and perhaps its outer form, so as to be scarcely recognisable as the same, and that as a result, instead of indicating the hours and minutes of a time reckoning adapted to the inhabitants of our globe, it indicated time in a wholly different way; that after a series of such transformations it fell to pieces, took the original form of the metals from which it was constructed, we should then have in this succession of events a parallel with the development, decline, and death of living organisms." Professor Mills carries out the parallelism to a greater length, but we have quoted enough to show that his power of illustration is considerable and his writing attractive.

The last section is that on the brain, which is well given, and is illustrated by many and very good engravings. Even here, however, there is some pleasantry, as in the imaginary conversation in which the author supplies the answers that would probably be given by a man after section of his semicircular canals in the following terms: "How do you feel?" says the operator; "why can you not rise and remain standing or walk?" To which the subject of the operation replies: "I feel all confused. I cannot stand or walk, because I do not seem to be able to make out what I should do. I have no clear idea of things about me, and so do not know how to proceed."

All the senses are dealt with well, but the section on the eye is written in a specially interesting manner, yet even here we notice some indications of want of care; for under the head of astigmatism it is stated that "in this defect the vertical meridian is supposed to be more convex than the horizontal," a statement that requires qualification, for the opposite condition is often observed. The work as a whole, though by no means exhaustive, supplies the student, and especially the veterinary student, with all the facts he is likely to require.

Zur Lehre von den Contagiösen Infectionskrankheiten. Von Dr. ERNST REGER, Stabsarzt am Cadettenhause zu Potsdam. Berlin: H. Kornfeld. 1890.

IN the work before us are embodied the results of a series of most careful investigations on the specific contagious diseases carried out under most favourable conditions by one who has gradually built up for his own use a method of noting and tabulating certain features connected with the spread of infective diseases from individual to individual. The main interest of the work lies in the sixty-three tables that accompany the text; but in the text itself the author puts forward certain general conclusions at which he has arrived in the course of his investigations. Having charge of the cadet barracks at Potsdam, he was able to obtain an exact record of all the cases of infective disease that came into the hospital, the rooms in which the patients had slept, washed, eaten, or attended classes, and even the men with whom they had been most intimately associated; and from these data he was able to trace from patient to patient outbreaks of measles, scarlet fever, parotitis, and similar maladies, and to follow the modifications through which the disease went as it was passed on from individual to individual. On reference to the sixty-three tables given, it is easy to follow the author's arguments, but it will be found that he is inclined to generalise somewhat too freely from the facts that he has at his disposal, in some cases his facts not appearing to bear out the whole of his conclusions. For instance, he holds

that because there is a general agreement as to the period of incubation in such diseases as scarlet fever, measles, rötheln, diphtheria, and mumps (with perhaps the exception of measles), and because all of them have many features in common, they are all species of mixed infection in which there is a common organism, and that the special modifications in each disease are the results of the presence of certain other specific bacteria. He holds that this common organism under certain circumstances loses its virulence, and regains it when placed under favourable conditions; that it and the other organisms which play a prominent part in the production of the special symptoms produce poisonous substances which may cause rapid intoxication of a patient, whilst through the spores that are formed the infection may be transferred to others, or they may give rise to a second crop of the organism in the original host (*Auto-infection*); that the producers of the mixed infection belong to the suppuration-causing group; and that they give rise to different symptoms and pathological conditions according to the tissues that they attack—the glands of the skin, the subcutaneous connective tissue, lymphatic glands, and lymph vessels, the mucous membrane, the serous surfaces, or other elements of special organs.

A short account is given of the relation of these facts to treatment, and then the writer records his observations on influenza and its relation to the diseases already mentioned.

The tables are models in their way, and a careful study of them will be well repaid, not only by the acquisition of a new method of tabulation by the reader, but also by the knowledge gained of the evolution of disease through a series of most interesting genealogical trees. Although we do not agree with the whole of the conclusions arrived at by Dr. Reger, we can heartily recommend his work to the careful study of practitioners, more especially of medical officers of health.

Analytical Records.

PURE CANE SUGARS.

(JAMES PHILIP AND CO., PURE CANE SUGAR COMPANY, 4, FENCHURCH-STREET.)

WE have received and examined the following samples of sugar from the above firm—icing sugar, castor sugar, refined lump, white crystals, Demerara crystals, and Barbadoes moist. They are neatly put up in 7 lb. bags, stamped, and guaranteed as pure cane sugars, free from beet. Beet sugar is now very largely consumed, but it is generally admitted to be not quite a perfect substitute for cane sugar, and, weight for weight, it does not possess the same sweetening power as the product of the sugar-cane (saccharum officinarum), whilst the keeping or antiseptic properties of cane sugar are certainly superior to those of the beet. There seems little doubt that a large proportion of sugar sold in London as cane is in reality beet sugar, or, at any rate, an admixture of beet. A distinct advantage is therefore offered to consumers of sugar by this excellent plan of Messrs. Philip and Co., who guarantee and label their sugars as consisting of nothing but the real cane variety. We have determined the amount of cane sugar in a few of the samples, which were merely selected as representative ones. The following figures were obtained: Castor sugar, 99·73 per cent.; white crystals, 98·86 per cent.; refined lump, 98·07 per cent.; Barbadoes moist, 92·00 per cent. The sample of white crystals, on drying in the oven and then allowed to cool, exhibited a bluish-green colour. On treatment with acid this was more marked. Caustic alkali discharged the colour to a light yellow. The addition of a minute amount of colouring material to sugar for the purpose of making it of a purer white and more attractive in appearance is admitted by manufacturers, who, indeed, state that it would be somewhat extraordinary to find a sample of sugar that was not coloured. It is also known that chloride of tin—of course in very minute quantity—is occasionally used to impart a bright golden yellow to the raw product. The results above are very satisfactory, the percentage amount of cane sugar, it will be noted, being as high as it can well be.

KEPLER EXTRACT OF MALT.

(BURROUGHS, WELLCOME, & CO., SNOW HILL BUILDINGS, E.C.)

The therapeutic value of extract of malt rests not only upon the presence of important food elements, as dextrin, maltose, and alkaline phosphate, but on the peculiarly active substance, diastase, which is concerned in converting the starch of farinaceous food into the more assimilable products. The masterly researches of Messrs. C. O'Sullivan, Brown, Heron, and Morris have shown that diastase is without action upon unaltered starch, or starch as it occurs enclosed in the cell. As soon, however, as the cellulose envelope of the granule is broken either by bruising or boiling, the starch granulose rapidly undergoes conversion or hydrolysis, even in the cold, into maltose and a variety of dextrin called erythro-dextrin. It is some time now since we had occasion to examine the well-known and much used Kepler extract of malt. Messrs. Burroughs and Wellcome evidently keep pace with the newest scientific facts, which every day contribute towards making this kind of preparation perfect. This is shown by the following analysis of a specimen which was recently submitted to us. One part by weight of the extract was found to completely convert in one hour at 100° F. seven times and a half its weight of starch into maltose and dextrin; in two hours at the same temperature fifteen times its weight of starch, and in three hours no less than thirty times its weight. Probably at a higher temperature Kepler extract would be capable of converting a still larger quantity. Moisture, 18·41 per cent.; solid matter (diastase, albuminoids, maltose), 80·37 per cent.; mineral matter (for the most part soluble phosphate), 1·22 per cent. The flavour has been further improved, and the delicacy of the colour contributes largely to its attractive appearance.

EFFERVESCENT BRAIN SALT.

(F. NEWBERY & SONS, 1 AND 3, KING EDWARD-STREET, E.C.)

Chief amongst the constituents of effervescent brain salt, according to our analysis, are bromide of ammonium and caffeine. The statements which are made, therefore, in favour of its efficacy as a remedy, used of course under medical direction, in the treatment of headache, nervousness, sleeplessness, and sea sickness, are not without foundation. Its composition reminds us of an excellent preparation of the same firm which we had occasion to examine a few years ago, and known as "bromo-soda." Brain salt is an elegant specimen of the art of granulating.

IVORINE—AN EMOLLIENT CREAM TO PREVENT CHAPS, CHILBLAINS, &c.

(BAKER & CO., 305, OXFORD-STREET, W.)

A preparation which can be said to possess properties of alleviative value to the skin will be regarded with satisfaction by the many who suffer from the tiresome affection of chaps or chilblains. The efficacy of ivorine is stated to be increased by the addition of an oleaginous extract obtained from the leaves of the ivor shrub, which is imported from the Pacific Islands, where, through its continued use, the natives are said to be enabled to withstand atmospheric changes. Mere chemical examination shows it to consist of a purely oleaginous substance which is entirely free from

injurious ingredient. In a case of badly chapped hands, the use of ivorine was found to be attended with distinctly beneficial results.

DRAGÉES FERRUGINEUSES DU DOCTEUR RABUTEAU.—CAPSULES AU BROMINE DE CAMPHRE DU DOCTEUR CLIN.—PILULES ANTI-NÉVRALGIQUES DU DR. MOUSETTE.

(CLIN ET CIE., PHARMACIENS, PARIS.)

These are all excellent preparations of the skilled pharmacists Clin et Cie. of Paris. The dragées ferrugineuses consist of white sugar-coated pills, containing a pale-green nucleus, which is somewhat obstinately soluble in water, the solution exhibiting an inky and sweetish taste. According to the reactions which were yielded on examination we regard the medicament to consist of a peculiar organic form of proto-iron salt. Dragées ferrugineuses are stated to be specially useful in anæmia, chlorosis, &c.

The capsules au bromine de camphre are thoroughly genuine preparations, from the fact that we succeeded by means of sodium-amalgam in regenerating both camphor and bromine. Bromide of camphor has been recently advocated as of service in heart affections, asthma, nervous and mental disorders. It is prepared by adding liquid bromine to camphor and distilling. So obtained bromide of camphor ($C_{10}H_{15}BrO$) is insoluble in water, but soluble in alcohol, ether, and chloroform, and crystallises in colourless prismatic needles which possess a smell resembling camphor ($C_{10}H_{16}O$) and turpentine ($C_{10}H_{16}$).

The red sugar-coated pilules (anti-névralgiques) readily yielded the two alkaloids, aconitine and quinine, on suitable treatment with alkali and a solvent, as ether. The former alkaloid was recognised by its well-known effect on the tongue, and the latter by the characteristic chemical reactions.

FINEST OLD SCOTCH WHISKY (SPECIAL DIETETIC).

(GEORGE CAVENDISH, 4, CULLUM-STREET, E.C.)

If persons of diabetic, dyspeptic, or rheumatic tendencies drink whisky at all, it should at least be a spirit of unquestionable purity and free from acidity and saccharine matter. How far this is the case with Cavendish whisky will be seen from the following items of our analysis: Absolute alcohol, 40·60 per cent. by weight, 48·00 per cent. by volume; equal to 84·00 per cent. proof spirit. Acidity, reckoned as acetic acid, 0·012 per cent.; total solid matter 0·075 per cent., and mineral matter 0·005 per cent. There is a remarkable absence of solid matter, and the amount of acid goes for nothing. The whisky is smooth in taste, and the presence of traces of tannin shown by the iron test would indicate it to be a spirit which has been matured in wood casks.

THE NATURE OF PERNICIOUS ANÆMIA.

To the Editors of THE LANCET.

SIRS,—Will you kindly allow me to make a brief explanation with reference to a statement which appears in your abstract of the second of the able lectures now being delivered before the Medical Society by Dr. Stephen Mackenzie. The prominence given in that lecture to my work regarding the nature of pernicious anæmia must be my apology for so doing. The result of that work has been, step by step, to trace back the characteristic changes in the blood to antecedent changes of a chemical character occurring within the gastro-intestinal tract, and to identify, as the basis of these changes, the various pathological conditions, such as cancer, atrophy of the gastric mucous membrane, gastritis, &c., which have been most usually met with in this disease. Since all these conditions are relatively common, while pernicious anæmia is rare, the conclusion is natural that when they coexist a new factor must have been introduced which still continues to operate from the same tract; and my latest observations have led me to the conclusion that this factor is the result of specific infection. It is with reference to this conclusion that the present explanation becomes necessary.

For in the lecture referred to as given by you in abstract, an objection to this view, raised by Dr. Mott, is quoted to the following effect: "It does not appear to me certain that this theory is proved, for in many diseases in which there is ulceration of the intestines lasting for months and years, *and in which the whole contents of the intestine must swarm with micro-organisms of many kinds*, with everything to favour absorption, there is no pernicious anæmia." Merely remarking in passing that the above statement tends to prove the *specific* nature of the intestinal changes in pernicious anæmia, assuming that such changes are the real cause of the disease, I desire to add that the above statement of facts, so clearly put, more especially that portion of it I have italicised, expresses very accurately the grounds on which, in part, my conclusion is based. For, as I have shown, an important difference exists between the intestinal changes under such circumstances and those found in pernicious anæmia. While in the former the amount of intestinal putrefaction is, as might be expected, not only relatively, but also absolutely greatly increased; in the latter the absolute amount of putrefactive change may be, and not infrequently is, actually less than in health. Nevertheless, in pernicious anæmia I have found certain poisons of bacterial origin in the urine, for whose presence the action of ordinary putrefactive organisms is inadequate to account, since they are absent in such conditions as those above mentioned by Dr. Mott in which these organisms abound. The absence of these substances from the urine when intestinal putrefaction is increased in amount, and their presence when it is not increased, were the grounds on which I based my conclusion as to the specific nature of the micro-organismal infection which I believe to occur in pernicious anæmia.

This conclusion is one, as I have further shown, which accords very well with the mode of onset of the disease in many cases, and explains at the same time its rarity. The pathological conditions of the gastro-intestinal tract may have existed, and frequently do exist for a long time, without giving rise to pernicious anæmia,—as is well exemplified in the frequent occurrence of cancer of the stomach, unaccompanied by pernicious anæmia. Whenever the latter is superadded to the former its origin can, I think, in most cases be traced to some antecedent exposure to such conditions of defective sanitation and the like as are well known to favour infection in the case of other specific diseases—such as typhoid fever and diphtheria. The explanation I have thus ventured to give is one which I feel to be due to Dr. Mott, to whom I have failed to make the grounds for my conclusion sufficiently clear, no less than to Dr. Stephen Mackenzie, whose admirable critical exposition has been the immediate occasion of directing attention anew to the subject. I am, Sirs, yours truly,

Wimpole-street, W., Jan. 26th, 1891. WILLIAM HUNTER.

LIVERPOOL NORTHERN HOSPITAL.—The work accomplished in this hospital during 1890 has been satisfactory. The horse ambulance had attended 1001 cases in the year. The average number of beds occupied was 130. The in- and out-patients numbered respectively 1947 and 5440. The balance sheet shows a debt to the bankers of the hospital amounting to £1782 2*s.* 4*d.*, and the committee appeal to the public for additional funds.

REGISTRATION OF PLUMBERS. — The Mayor of Cork presided at the first annual public meeting of the Munster District Council for the National Training and Registration of Plumbers. Dr. Corby, in moving the adoption of the Council's annual report, said he wished to call attention to the fact that the national system of registration of plumbers had been founded for the purpose of specially examining and registering plumbers in the interest of the public health. From his own knowledge he could say that the connexion between plumbing and the public health was very marked. He detailed a number of cases in which deaths had occurred through defective sewerage, and among the diseases produced by this cause he mentioned diphtheria and typhoid fever. He strongly urged the corporation of Cork to appoint duly qualified plumbers to inspect the sanitary arrangements in dwellings where infectious diseases broke out.

THE LANCET.

LONDON: SATURDAY, JANUARY 31, 1891.

ACCORDING to present appearances there is every prospect that the Midwives' Bill will not be rushed through Parliament. We are assured on good authority that an understanding has been arrived at between influential men on both sides of the House that time and opportunity shall be given for ascertaining the facts of the case—both those which, in the opinion of some, constitute a reason for legislation, and those which, in the judgment of others, constitute a reason for declining all legislation on the subject. It would go far to satisfy all parties if the evidence of experienced and responsible persons were taken on both sides of the question, such as coroners, registrars of births and deaths, medical practitioners, and others. Such an inquiry would have the further advantage of raising the question into an impartial atmosphere. We ourselves would suggest the appointment of a select committee of the House of Commons. It need not occupy any great length of time. The facts to be ascertained are not in their nature abstruse or difficult; but they are very important. They involve enormous issues of life and death and suffering. It is greatly to be desired that they should be thoroughly ascertained. If legislation must take place, it should not exceed the demands of the case, or be unmindful of the principle so fully recognised by Parliament in its last Medical Act that midwifery is a part of medical science, and cannot be practised satisfactorily excepting by persons trained in the three great branches of our art—medicine, surgery, and midwifery.

Some of the opposition to the Bill in our own ranks is reasonable enough from the medical point of view. Medical men know the risks of maternity, and know well that no cases in practice require more care or more judgment, or more medical insight and skill than puerperal cases. A painful case was reported in all the papers last week, where a midwife was committed for manslaughter by conveying puerperal fever—and so death—in three cases, though it is stated that she was warned by medical men, and even generously promised their assistance if she would desist from practice. It transpired that she knew nothing of puerperal fever, and thought all pyæmic conditions implied a cut finger. Yet this woman had attended 900 cases of midwifery! The whole character of the obstetric art has been raised since it passed from the hands of midwives into those of medical men, and became a recognised part of medical practice. On the other hand, the existence of midwives to the number of many thousands cannot be ignored, the majority of them being uneducated and untrained. The compulsion of law in medical matters is very light. If a man breaks his leg, it does not compel him to have a regular surgeon. If a woman is to be confined, it does not and it never will compel her not to employ a midwife. The compulsion can only take the form of requiring that persons calling themselves "midwives" shall show some justification for using the title and of restricting their practice to a simple class of cases, and in default of compliance with these conditions of imposing penalties. These penalties should be explicit and effective. It will be far better for the State to leave the subject untouched than to legislate on it in a half-hearted way, and, while giving a kind of status to trained midwives, either permit them to exceed their function, or allow others to practise and to pose as "midwives."

If, as we hope, a select committee should be appointed, the profession should try to agree on a rational and harmonious representation of the medical aspects of the case. Those who are altogether opposed to such legislation should candidly say so in the meetings of the profession or in its press. Their arguments point in this direction, though they seem to think it better policy to appear as only opposing this particular Bill, which, by the way, is practically the same as the Bill of last year. It is not easy to believe that the bulk of the medical profession really propose to prop up and perpetuate an order of "Gamps," and to allow women without intelligence or principle to go on attending a large number of cases. We can see no proof that medical men generally are prepared to undertake so great a responsibility, or to argue before a committee of the House of Commons that the correction of this evil will be fraught with danger to the medical profession. The attempts to commit the profession to so extreme and undignified a view have signally failed.

It may be argued that there is a deeper opposition to legislation than finds expression. We cannot deny the possibility of such a feeling, but unless those who believe in its existence can produce proofs of it they should seriously ask themselves whether they would not do well to combine with the rest of the profession to get the Bill so amended as to restrict midwives to the simplest cases and to take some guarantees of their respectability and training. If the profession goes before a committee harmoniously with such views, it will have much influence in controlling the shape of the Bill. If extreme views are pressed, it will lose all such influence and place itself in an undignified position. Though we report a disposition in Parliament to investigate all the bearings of this question, we have heard nothing to lead us to doubt that some such legislation will sooner or later take place.

DR. PURDY of Chicago has recently published in the columns of the *New York Medical Journal* the results of his researches into the distribution of Bright's disease in the United States, with the special object of showing the influence of climate upon the malady in question. He takes the year 1880 for a standard of comparison, and finds that in this year the deaths from morbus Brightii were 75,386—a proportionate mortality of 7·11 per 1000 deaths. The heaviest mortality is found in the States of New Jersey, New York, Connecticut, Massachusetts, and New Hampshire, while the lowest mortality is found in the States of Tennessee, Georgia, Nebraska, North Carolina, and Arkansas. Speaking generally, the eastern coast line of the Union would seem the most affected (its middle region most of all), then the northern portion, and, lastly, the southern. The first of these districts shows a mortality of 19·73 per 1000 deaths, and the northern coast region 17·38 per 1000 deaths, or, in

other words, the rate is here from twice to three times the general average. In the south-western States the mortality from Bright's disease falls to from 1·5 to 2 per 1000 deaths, or about a fourth of the general average.

From these statistics Dr. PURDY draws certain conclusions regarding the influence of meteorological conditions upon the causation of Bright's disease. He relies upon his facts to prove that the conditions which favour the genesis of the malady are cold, damp, and variability of temperature, and that, on the contrary, heat, dryness, and equability tend to diminish the liability to Bright's disease. He believes that cold is effective chiefly when associated with a high degree of humidity, and that a low temperature is readily tolerated when the air is dry. Similarly he maintains that humidity is inoperative if accompanied by heat and equability.

These conclusions do not present any feature of novelty, and are quite in accord with established opinions and recognised facts. It seems obvious *a priori* that the subject of renal disease needs above all things such conditions of climate, occupation, clothing, and diet as will promote a free action of the various emunctories, above all of the skin. A dry climate, not too prone to sudden oscillations of temperature, permitting a maximum amount of exercise in the fresh air, and affording abundant sunshine, would seem best to meet the indications of the case; but it must be remembered that in very dry climates equability of temperature is simply a meteorological impossibility. We pay for abundant sunshine and dryness the price of great differences between sun and shade temperatures, and between the thermometric range of day and night. This cannot be helped, and the obvious lesson is that we must strive to obtain the maximum advantage from a climate of this class by a very careful regulation of clothing, habits, hours of exercise, &c. It is by no means so clear that a hot, moist, and equable climate is adapted to cases of Bright's disease. Such a climate tends to depress the system, but it has the very great advantage of protecting against chills and inflammations; and since we know how prone albuminuric patients are to inflammatory affections of the serous and mucous membranes, and to fresh exacerbations of the renal malady, it is obvious that a climate of this class may have its utility in some cases of Bright's disease. Its effect is probably less curative than palliative, and tends to protect the patient against the accidents and complications of his malady rather than to exercise any decided influence over the disease itself.

We are, however, disposed to doubt whether Dr. PURDY'S statistics afford any sure ground for attributing a preponderant influence to climate in the etiology of Bright's disease. It is significant that by far the heaviest mortality is found in those portions of the States which were first colonised, where, consequently, the density of population is greatest, and the struggle with mal-hygienic conditions of existence probably most severe. To compare Boston and New York with Arkansas and Tennessee, and to attribute all the differences in liability to disease simply to geographical position, would be an obvious fallacy which Dr. PURDY would certainly not perpetrate. The question, so far from being a simple one, is really most abstruse. It can be decided only by a careful attention to such points as proportionate density of population, the occupations and habits of the people, their food and drink, their clothing, amusements, &c., as well as climate and geographical position, which are in many ways, direct and indirect, very influential factors; it is only by such an exhaustive survey of the subject that we are likely to throw any light upon complicated questions of etiology. The race factor, again, cannot be left out of account in a country presenting such a multiplicity of races as the United States. The varying liability of different races to different diseases is a well-known and significant fact, and although the evidence on the subject is at present scanty, it will no doubt be some day thoroughly worked out. What can be more striking than the comparative immunity of the negro from yellow fever and his remarkable proclivity to small-pox? It is said that the Irish in America present a liability to Bright's disease out of all proportion to their numbers; but we cannot feel sure how far this liability is racial, and how far due to destitution and poverty.

On the whole, the evidence regarding the etiology of Bright's disease would incline us to the view that the most important cause of the malady is improper food, unwholesome occupations, and insanitary dwellings. The study of the question leads us, in fact, to the same conclusion as the study of phthisis—viz., that the chief danger of humanity at the present day is that the growth of great cities may lead to the neglect of some of those primitive conditions of health—fresh air, light, exercise, plain food, healthy housing,—without which the vigour of the organism cannot be long maintained. It does not follow that large cities are necessarily and inevitably unhealthy, but there can be little doubt that the concentration of great masses of population makes the attainment of the primary conditions of health more difficult. It is one of the hopeful features of this age that we are becoming more and more alive to these difficulties, and more solicitous for their removal.

A SUB-COMMITTEE was appointed by the Glasgow Town Council a few months since to inquire into the greening of French vegetables with sulphate of copper. The committee approved of the report which was presented to them, and recommended that intimation be made to dealers in canned vegetables that the sanitary officials would institute proceedings whenever the circumstances in connexion with their re-greening were sufficient to warrant a prosecution. The report is signed by the medical officer of health, the sanitary inspector, and the analysts of the city, who, in the evidence they furnish, quote the opinions of the French authorities upon the subject. That preserved peas are in many instances greened by means of a salt of copper seems well established. This treatment with copper salt, it may be remarked, is not at all necessary for the preservation of the vegetables. Sealing them up hermetically after exposure for a time to a temperature above boiling-point is all that is required. This was the simple method discovered by APPERT at the close of the last century, and early in the present century it was put into practice on a large scale, and rapidly grew, particularly in France, into an important industry. The preserving process, as might be expected, causes the vegetables to lose their natural

colour and to acquire a somewhat stale flavour. Hence, and in order that the preserved article may become more attractive to the public eye, *reverdissage* or re-greening is resorted to, and this is accomplished by steeping the vegetables for from five to fifteen minutes in a hot solution of sulphate of copper of variable strength, the proportion used depending apparently on the caprice of the manufacturer. In actual practice the vegetables are washed and placed in tin boxes, which are filled up with sea-salt and sugar, soldered down, and subjected to a temperature varying between 220° F. and 239° F. The quantity of copper salt retained under this treatment amounts to from 8 to 27 parts per 100,000 of the dried vegetables. Compounds of copper are unquestionably poisonous, and small doses continued for some time are known to produce severe abdominal pain, impairment of digestion, and diarrhœa. Bearing in mind well-known toxicological facts like these, it is surely absurd to suppose that small quantities taken continuously in food are harmless. The action of the French Government in this matter in 1853 was somewhat experimental. They prohibited the use of copper salts in preserved articles of food, at first in Paris, but the prohibition seven years later was extended to the whole country on the recommendation of appointed experts, who were of the opinion that, although the quantities extracted from certain samples were small and not likely to produce serious accidents, yet the presence of a highly poisonous substance in proportions without a fixed limit involved a risk which should not be permitted to exist. But here was a pronouncement calculated to be fatal to the successful working of an industry which employed no less than 20,000 persons, and representing a business of 40,000,000 francs. Appeals were, of course, made against this decision, and toleration was urged to the extent indicated in the following curious conditions: (1) That a maximum limit of the quantity of copper salt should be fixed; (2) that on every box the nature of the agent should be legibly inscribed; (3) that greening for export should be permitted, *but not for home use*. At length it was reported by the Consulting Committee in 1889 that the position of the information which they possessed as to the noxious influence of salts of copper, there was no real ground for prohibiting the practice of re-greening preserved vegetables with those salts. The prohibition was withdrawn, and the practice of *reverdissage* continues to the present day. The cultivation of vegetables such as peas in this country, it is pointed out, is considerably handicapped by the substitution of the re-greened, stale, and probably less digestible article of foreign growth, which there is good reason to suppose is not infrequently palmed off as the genuine, fresh, home-grown product. The majority of those who have any concern in the important question of food in its relation to health will share generally in the views which are expressed by the medical officer of health, sanitary inspector, and the analysts of the city of Glasgow in the concluding sentences of their report. They are of the opinion that the process of re-greening is fraudulent in its intention and injurious in its commercial results; that re-greening with sulphate of copper does not make vegetables more but probably less wholesome; that the public ought when purchasing preserved vegetables to ask for ungreened or at least vegetables free from copper; that the guardians of the public health ought to come to an understanding as to the sale of vegetables containing copper, while holding themselves free to act according to the circumstances of the case and the scientific evidence obtainable from time to time.

A CONFERENCE was held at Spring-gardens last week between members of the Housing of the Working Classes Committee of the London County Council and delegates from the several vestries and district boards. The meeting received a report from the medical officers of health of the different authorities, prepared in compliance with a request that they should endeavour to prescribe the conditions which may render a house dangerous or injurious to health so as to be unfit for human habitation. We recently pointed out that, seeing that the question of degree enters largely into the consideration whether a house is be regarded in this light, it is impossible to define these conditions so that any fixed rule may be laid down. The medical officers of health have themselves pointed this out to the conference, but they have, besides, given some account in the briefest manner of the principles which guide them, and have enumerated such conditions as faulty site, insufficient light and ventilation, and dilapidations, as those upon which they rely. They have also expressed a preference for dealing with filth and defective drainage under the Nuisances Removal and Sanitary Acts, but have stated their opinion that where these are associated with other conditions they justify proceedings under the Housing of the Working Classes Act.

Although they have not been able to carry into effect the wishes of the conference, their labours cannot be said to be wholly wasted if they have made clear to the representatives of local authorities that houses faulty in one and another particular must be dealt with on their own merits, and that it is therefore necessary to exercise independent judgment in each case. The medical officer of health may recommend proceedings for the abatement of nuisances, and the improvement of houses under the Nuisances' Removal Act, and he must necessarily be guided by the whole of the circumstances whether the house should be closed.

But the question arises whether the closing, if this be necessary, should be effected under the Nuisances' Removal Act or under the Housing of the Working Classes Act—whether, in fact, the latter statute gives greater powers than the former. There does not appear to be very much difference between the two, but under the Housing of the Working Classes Act, if the house after closing becomes dangerous to the health of the neighbourhood, the local authority may make an order for its demolition. With this possibility hanging over the owner, and with risk of greater penalty, he is more likely to comply with the requirements of the authority. The newspapers have afforded considerable evidence that the Act of last year has been systematically enforced in many parts of London, and probably it will not be long before its effects come to be

fully appreciated. We observe, however, that magistrates have in many instances not imposed penalties. This leniency, we think, is unfortunate, for if a reasonable standard of house conditions is to be maintained in London, owners must be made to recognise that it is their interest not to allow houses to fall into bad condition. The Act, to be useful in the best sense, must be preventive as well as curative, and for this purpose the willingness of the magistrates to punish offenders must not be a matter of doubt. We desire to commend this thought to their attention; without such assistance as they can render, the maintenance of a staff of inspectors, imposing considerable expense upon the ratepayers, is unavoidable.

Annotations.

"Ne quid nimis."

RAILWAY SERVANTS AND LONG HOURS OF DUTY.

THE report made by Major Marindin upon the collision which occurred on the 21st ult. at the Brindle Heath Junction of the Lancashire and Yorkshire Railway, coming as it does while the railway strike for shorter hours is pending in Scotland, will have, it may be hoped, a salutary effect in riveting public attention upon what is a crying abuse in railway management. The collision was a very serious one, involving injury to twenty-five passengers, and in at least one instance a fatal result. The blame of it is cast by Major Marindin entirely upon a goods train driver who had been on duty for twelve hours and three-quarters, and had still another two hours to work. The excuse is a lame one, for although such hours are excessive, they are not so excessive as to afford an explanation of the very culpable incompetency which the driver appears to have exhibited. But in awarding blame it is impossible not to feel that a share, and not a small share withal, is due to the managers, who are responsible for a system so thoroughly bad as that which imposes fourteen hours' continuous labour upon men entrusted with the heavy responsibilities which devolve upon locomotive engine drivers. Moreover, not only is a share of the blame their due, but it is at the present moment a matter of the greatest public interest that they should receive it. The criminal law deals, and deals fairly effectively, with delinquent railway servants, but the responsibilities in this connexion of directors and managers can only be enforced by public opinion. Public opinion, moreover, labours under the peculiar disadvantage of being very badly informed upon the point. Such a conclusion is, at least, inevitable if we may trust a communication which appears in one of our provincial contemporaries, and has been brought to our notice by a correspondent. The following is given there as an actual instance of a week's work:—

	Time on duty.
On duty Monday morning, off Tuesday ...	21 hours.
On Wednesday midday, off Thursday morning	19 ,,
On Friday night, off Saturday afternoon ...	16 ,,
Total	56 hours.

Now it will be seen that these men were on duty three times during the week for an "excessive number of hours at a stretch," but their total hours were only 56. Instead, therefore, of having "overtime pay," they will get four hours less than a week's money. Whether the public danger or the private injury involved in the imposition of such excessive labour is considered, the conclusion is equally inevitable that means must be found of ending the system.

THE ILLUSTRATION OF DISEASE.

THE methods at our disposal for recording the aspect of disease at some particular period in its progress, if that disease presents features which cause alteration in the outline or the colour of the surface of the body, have much improved of late years. The faithful representations which we owe to photographic skill or the trained pencil meet the requirements in many instances where mere change in outline or form is required to be shown; but where one wishes to closely represent affections, much of the successful exposition of which depends upon the colouring of the reproduction, for fidelity to nature and close resemblance to the original there is nothing equal to the models in wax or composition material. The museum of St. Louis, Paris, stands pre-eminently in advance of those of all European or other hospitals. It possesses some two thousand models in wax or other material prepared by M. Baretta. This represents thirty years' work of this celebrated artist. Guy's Hospital Museum has also procured this important aid to teaching through the work of the late Mr. Toune. However, although most medical museums have a few of such models, they are usually only copies of foreign works, and generally of an anatomical character, and are easily and cheaply reproduced. Not so with clinical and pathological specimens, which, being original, require expert handling. We have had an opportunity of inspecting two wax models which have lately been purchased by the Royal College of Surgeons from Messrs. Baillière, Tindall, and Cox, the medical publishers; they are very beautiful and artistic productions, and appear both in form and colour to faithfully represent the respective original diseases to which they refer. The above firm have established a studio at their publishing establishment for the production of anatomical, clinical, and pathological models in wax or other suitable materials. The studio is under the supervision of Mr. W. Swainson and an expert staff. For the teaching of our students such models are invaluable, and should, we think, form part of the equipment of all the museums connected with our medical schools. We trust, therefore, that the authorities of the schools will at once see their way to take advantage of acquiring such useful adjuncts to their teaching.

THE BETHNAL-GREEN AREA.

EARL COMPTON carried through the London County Council on Tuesday the recommendations of the Housing of the Working Classes' Committee as to the procedure in dealing with the area in Bethnal-green and Shoreditch, represented under Part 1 of the Housing of the Working Classes Act. The proposals of the committee were submitted to severe criticism, and in some instances the speakers discussed the desirability of the scheme. One of the recommendations of the committee, that a comparatively small proportion of the houses should be closed as soon as the Council obtained possession, was thought by some to indicate that the houses in the area were not in so unsatisfactory a condition as had been represented, and apparently the point was overlooked that the Council would desire to displace as few as possible of the inhabitants at once, and would do such temporary repairs in many of the houses as would give longer time for the inhabitants to find other homes. No doubt much of the opposition was due to the fear that the committee, in seeking for permission to acquire a neighbouring site, was desirous of undertaking building operations, which would eventually place the Council in the

position of being responsible for the provision of dwelling accommodation for a vast section of the community. This would undoubtedly be disastrous, but there is no reason why the additional site should not be used to release the Council from the obligation of covering the whole of the represented area with houses for the working-classes, and why it should not give the Council the opportunity of devoting some portion of this area to purposes which would be more beneficial to this class than the erection of dwellings. The activity the Council has shown in considering the wants of the several classes of the community is ample reason for thinking that many uses for any spare land will abundantly occur to them.

SHEFFIELD AND THE MIDWIVES' BILL.

A DEPUTATION from the Sheffield Medical Society, consisting of Dr. Keeling, Dr. Martin, and Dr. Porter, hon. sec., waited on Mr. Stuart Wortley, M.P., complaining that the Midwives' Bill was ill drawn and faulty in several particulars. They had not confidence in the special knowledge of midwifery of the Medical Council, on whom the Bill placed the duty of framing regulations; still less in that of the Privy Council. Only those midwives who had had ten years' experience should be registered as existing midwives. If a large number of midwives were to be trained it would interfere with the clinical material, already scanty enough, for the teaching of medical students. It will be noticed that none of these objections touch the principle of the Bill or constitute a radical objection to some legislation to abate the evil of ignorant and untrained women practising midwifery.

POISONING FROM "BLACK-DAMP."

SOME of those who chance to escape from the explosion of the dreaded "fire-damp" in mines survive only to fall victims to the equally dreaded after-damp. After-damp consists of a mixture of carbonic acid, watery vapour, and nitrogen in varying proportions. It is in fact the gas which results from the combustion of fire-damp. Fire-damp is a mechanical mixture of carburetted hydrogen (CH_4), nitrogen, and carbonic acid. In an atmosphere containing 22 per cent. of the gas a man may still breathe for some considerable time, the only feeling of discomfort experienced being that of mental lassitude. But in an atmosphere containing one-third fire-damp the human subject is rendered insensible. On the other hand, in air containing 10 per cent. of carbonic acid gas, life can only be maintained for a short time, and a lighted candle for a still less time. The late Dr. Angus Smith has shown that 3 per cent. carbonic acid gas is fatal if the oxygen in the same atmosphere falls below 18 per cent. Coal has the peculiar property of occluding marsh gas or fire-damp, and again giving it off when the external pressure happens to be reduced or the temperature increased. This probably occurs in coal-mines and, likely enough, in the bunkers of a ship. One hundred grains of coal have been known to give off as much as 200 cubic centimetres of gas consisting of 90 per cent. marsh gas ($C H_4$), 9 per cent. nitrogen, and 1 per cent. of an equal volume of oxygen and carbonic acid. In the coal bunkers of a ship this liberation of occluded gases would, it seems probable, take place when any sudden fall in the barometer occurs, and also when the vessel passes into warmer regions. Hence, unless the coal bunkers are adequately ventilated serious explosions may ensue, culminating in the loss of the vessel. A very curious case of poisoning under peculiar circumstances, resulting from the inhalation of carbonic acid gas (known to miners as after-damp, choke-damp, black-damp, dampie, according to the origin and character of the gas), was recorded in a contemporary last week. It was noticed that a house in Darlaston, near Wolverhampton, which was occupied by a greengrocer and his family, remained for a longer time than usual shut up. Fortunately, it was decided to break into the house, and when this was done the inmates were found lying in bed in a state of insensibility. On making an examination the cellar of the house was found to be full of "black-damp," which is believed to have emanated from the ground, which is in close proximity to the workings of an old coal mine. So noxious was the foul air that many who endeavoured to render assistance were overcome and fainted. Two birds and a cat were found dead from the same cause, and the people occupying the adjacent houses, it was ascertained, had been attacked with sickness and prostration. Through the timely and prudent action of the neighbours any fatal consequence, which might otherwise have happened, was averted. So far as regards the predisposing cause, the case is one we think without precedent. The lesson it teaches is clear. Great care should be taken in the construction of houses close to disused coal mines, in order that the possibility of ingress of any form of "damp" may be avoided. It would be well perhaps to stop up any holes hard by a dwelling so situated, with slaked lime, that the poisonous gas may be to a large extent absorbed. Miners take the precaution of placing casks of lime-water at intervals in the mines, so that in the event of explosion they may dip a cloth in the lime, and hold it loosely to their mouths. This procedure removes much of the carbonic acid, and gives the miner a better chance of reaching the main shaft.

PENALTY FOR SELLING DISEASED MEAT.

THERE is an obvious justice in the strict supervision exercised by those authorities who control the importation of provisions intended for consumption in the metropolis. Neighbouring towns of large size are virtually robbed in order that London may be satisfied, and the superabundance thus forced upon the market is in some respects hardly justified even by the requirements of a colossal population. It is at least natural that under such conditions of supply quality of material should be a primary consideration. To sanction or overlook any neglect in this particular would especially injure the laborious thousands whose absolute necessaries, under pressure of work and in an atmosphere of indifferent purity, are sufficient rest and wholesome food. The sentence of six weeks' hard labour inflicted a few days ago on a salesman at the Guildhall Court, for sending diseased meat to the London market, though severe, was probably not unduly so. In comparison with one of three months, which we have already noticed in connexion with a similar offence, it appears almost lenient. The dealer punished on the present occasion had previously offended in the same way, and had paid a heavy fine. We may fairly conclude therefore that the prospect of a market profit had in his mind overcome the dread of a mere money penalty. Perhaps a few weeks' enforced absence from business may supply a stronger incentive to the belief and practice of an honest policy in future.

COUNTY HEALTH OFFICER FOR DERBYSHIRE.

WE are glad to learn that the Derbyshire County Council have decided to appoint a county medical officer of health. Many counties somewhat naturally feel that the elimination from the Local Government Act, 1888, of so much that had to do with public health administration justifies a postponement of the appointment of county health officers. But in counties where questions of river pollution arise there is no justification for any such delay. Indeed, there are few questions which are involved in greater difficulty, and at every turn that class of scientific knowledge which is especially the possession of the skilled medical officer of

health is needed in order to deal with the subject. In the West Riding of Yorkshire and in Lancashire this need has been felt, and it has been met. It is now the same with the County Council of Derby, who find themselves face to face with questions involving the pollution by sewage and manufacturing processes of streams which take their rise in Derbyshire, and which are concerned with the pollution of the Irwell and Mersey and of the Manchester Ship Canal. The Council hope by this appointment so to deal with streams within their own jurisdiction as to render joint action with other counties and its attendant cost unnecessary. If this result is to be attained, a first-class appointment should be made, and the officer elected should be certain of the support of his Council in such action as he may advise or take.

THE VASO-DILATOR ACTION OF UREA.

THE researches of Abeles and Munk on the effect of urea in the blood upon the renal vessels, causing them to dilate, have recently been supplemented by Drs. Cavazzani and Rebustello, who have made a series of observations in the physiological laboratory of the University of Pavia upon the effect of urea when circulating in the blood on other vessels in different parts of the body. They find that a vaso-dilator action is produced similar to that observed in the renal vessels, but less marked in extent. The greatest effect is observed in the cerebral vessels, and the least in the vessels supplying the limbs, the hepatic vessels being affected to an extent intermediate between the two. Generally speaking the effect is directly proportionate to the amount of urea in the blood; but the hepatic vessels seem to present an exception to this rule, for the dilatation in them appears to be about the same whether the percentage of urea in the blood is high or low. The greater the quantity of urea, and the more marked its action, the sooner the effects pass off. With reference to the various organs, the effects pass off first in the cerebral vessels and in the vessels supplying the limbs, next in the renal vessels, and last in the hepatic vessels. In the renal vessels the acceleration of the circulation produced by the urea is most marked when the blood-pressure is low. The smallest dose of urea which will produce vaso-dilator effects is not the same in different parts of the body; thus, one part per thousand of blood is necessary in most of the viscera, but in the kidneys half that amount is sufficient.

BOLTON FEVER HOSPITAL.

SOME months ago the Fever Hospital belonging to the Corporation of Bolton, Lancashire, came rather prominently before the public in connexion with a dance or party given there by some members of the staff, and indignant protests were made at what was said to be expenditure of public money from the rates for any such purposes; but last week a more serious allegation was made concerning its internal administration and supervision. The Rev. S. Bond recently had his little girl removed there suffering from scarlet fever, and he now complains that she was sent home whilst in an infectious condition and conveyed the disease to another child. But he further complains that the child returned home in a dirty condition; that the conduct of boys and girls placed together in the same ward was indecent and disgusting, the supervision lax, even approaching neglect; that some of the patients had insufficient clothing, were set to fetch in coal &c., and that foods sent to the hospital never reached the patients for whom they were intended. The Sanitary Committee of the Corporation have instituted an inquiry into these charges, and as hitherto the hospital has had a good reputation as regards the treatment of patients sent there, it is to be hoped a different complexion may be put upon the above statements. In the meantime it may be pointed out that the fact of a child having infected another after leaving the hospital with such an intensely infectious disease as scarlet fever, unless there is shown to have been some neglect on the part of the hospital staff, is scarcely a fair ground for a sweeping condemnation. In all fever hospitals it is customary for boys and girls of nine or ten years of age to be mixed; and fetching in coal or otherwise assisting in the wards by convalescents, who often for two or three weeks prior to their discharge are in perfect bodily health, is no hardship. The absence of supervision, rude or indecent conduct, and want of cleanliness, are, if they prove to be true, serious matters, and should receive the prompt attention of the managing committee, otherwise the usefulness of the institution in checking the spread of infection will be greatly interfered with, as in almost all cases the admission of patients is voluntary, and often effected only by considerable pressure being brought to bear upon the friends to secure permission for their removal.

COMPLIMENTARY DINNER TO MR. GANT.

ON Wednesday evening, the 28th inst., the members of the medical staff and several of the governors of the Royal Free Hospital, together with past and present Presidents of the hospital, entertained Mr. Gant at dinner at Limmer's Hotel. Mr. Gant, whose name is widely known in connexion with surgical work, has recently retired from the staff of this hospital, and been elected consulting surgeon after a term of service of thirty-seven years' duration. Dr. S. West, the senior physician, occupied the chair, and a most cordial reception was given to the guest of the evening. This is the first occasion on which the medical staff of the hospital and members of the governing body have met together in this manner, and it is hoped that a Royal Free dinner will be an annual event, the good relations between the medical and lay elements of the hospital being thereby strengthened.

THE OPTIC THALAMUS AND SENSATION.

IN the *Philadelphia Medical News*, Dr. Hugo Engel describes a case of considerable importance with reference to the relation of the optic thalamus to the special senses and to common sensibility. The patient was a middle-aged man with a definite history of specific disease. Before coming under observation he had had more or less vague symptoms of affection of the central nervous system during the previous year. Those consisted chiefly of pain in the head with occasional acute exacerbations, and giddiness. On getting up one morning he found that he staggered. The patient ascribed this to loss of sensation in his right foot. He next found that the whole of the right side of his body was anæsthetic, and that he had lost the power of tasting and smelling on the same side. Nine days later there was complete loss of taste and smell on both sides, and deafness of both ears. Two days later he suddenly became blind in both eyes, and had frequent convulsions, in one of which he died. At the necropsy, characteristic changes were found in the cerebral arteries, and a large gummatous growth was discovered growing apparently from the fornix and spreading back over both optic thalami. The growth was more extensive and apparently older on the left than on the right side, pointing to a previous involvement of this side in the morbid process, and thus corresponding with the earlier symptoms on the right side of the body. The author points out the existence of four collections of cells in the thalamus described by Luys: the most anterior, which is highly developed in the dog, and is most probably in some way connected with smell; the second possibly connected with hearing; the third with general sensibility; and the fourth, in the region of the pulvinar, connected with the visual tract. While the situation and extent of the growth,

coupled with the clinical history of the case, make the explanation which is offered, of a gradual involvement of those groups of cells in the order mentioned, a plausible one, it must not be forgotten that, even granting the existence of such isolated groups of cells, their function is probably only intermediary, so that pressure upon fibres, either conducting to them or from them, as well as upon others running in or near the thalamus, would produce the same effects as involvement of the cells themselves. In other words, we must, in any growth such as the one described, allow for pressure symptoms, and we must not lose sight of the fact that the growth started in the fornix, a structure which some authorities agree in connecting very intimately with the conduction of sensory impressions.

COLLEGE OF SURGEONS LECTURES FOR FEBRUARY.

THE Hunterian oration will be given by Mr. Hutchinson on Feb. 14th, in the lecture theatre, at 3 P.M. Mr. J. Bland Sutton, F.R.C.S. (Erasmus Wilson Lecturer), will give three lectures on the Value of Comparative Pathology to Philosophical Surgery, on Monday, Wednesday, and Friday, Feb. 9th, 11th, and 13th. Professor C. B. Plowright, M.R.C.S., will give three lectures on Fungi in relation to Plant Disease, on the 16th, 18th, and 20th; and Professor W. W. Cheyne, F.R.C.S., three lectures on the Pathology of Tubercular Disease of Bones and Joints, on the 23rd, 25th, and 27th. All these lectures will commence at 5 P.M.

THE CARE OF EPILEPTICS.

IN the *Boston Medical and Surgical Journal* Dr. Bullard discusses and attempts to answer the question, What is to be done with chronic epileptics? Everyone will agree with him that there is no disease more distressing to the sufferer, or more full of anxiety to his friends, on account of the liability to accident during an attack, as well as on account of the mental disturbance (slight and temporary it may be) which is so often the sequel of a paroxysm. The presence of epileptics, in short, among the ordinary community without any special protective provision is a standing danger not only to the patient, but to other members of the community. And this is true not only of the patients who can legally be transferred to an asylum: there are undoubtedly many others whom it would be impossible to treat in this way, and it is with regard to those that the difficulty as to what should be done with them arises. Three methods of dealing with them are open to us, according to Dr. Bullard. We may establish institutions in connexion with asylums, separate to a great extent but under the same management; or we may have a large number of small establishments grouped together and all under one management; or we may have an epileptic colony in which the patients are boarded out in families. In this last plan it is evident that there are many disadvantages. The patients are not under trained care or experienced treatment, and they are on the one hand liable to accidents, while on the other they may also become dangerous to others. Then the association of epileptics, not as a rule mentally affected, or at all events whom it is impossible to certify, in an institution, however independent, yet connected with a lunatic asylum, is a plan which, we fear, will not recommend itself either to the friends of epileptics or to the laity generally. Dr. Bullard concludes that on the whole the cottage hospital system, as he calls it, is best. In this there would be a large number of small buildings, with a few patients in each, and attendants according to the number. It is evident that in Massachusetts there exist difficulties similar to those we have here. Whether an attempt will be made to solve them in the manner indicated in the article under consideration remains to be seen. For our part we see far fewer disadvantages, and far more advantages, in the establishment of institutions in the nature of hospitals of considerable size than in the multiplication of smaller refuges. And there is no doubt that, in course of time, some provision will have to be made for the care of a class of patients who are unable to care for themselves, and who, moreover, may at any time become dangerous to others.

SANITARY REFORM IN FRANCE.

WE have to congratulate the *Revue d'Hygiène*, which is the official organ of the Société de Médecine Publique et d'Hygiène Professionnelle, on the twelfth anniversary of its publication. "L'Etude et les Progrès de l'Hygiène en France de 1878 à 1882," by Dr. Napias and Dr. A. J. Martin, is a bulky and interesting volume, which shows that some good work had been achieved before the twelve years in question. Nevertheless, this work was more of a tentative, theoretical character, and the cause of hygiene was then only advocated by a few sanitary reformers. The Second International Congress of Hygiene, held in Paris during the Universal Exhibition of 1878, gave a great impetus to the consideration of questions of public health; and the Society, which had so successfully organised this congress, felt that it was necessary to give the public periodically a record of its endeavours. With the foundation of the *Revue d'Hygiène* really dates the modern revival of sanitary science in France. This revival has been affirmed by congresses and expositions, and by the formation of numerous societies for the promotion of sanitary science, both in Paris and in the provinces. The practical results have been the creation of museums of hygiene and sanitary bureaux in a large number of towns, together with municipal laboratories for the analyses of food-supply, &c. Many hospitals have been reconstructed, the water-supply of towns has been more carefully organised, sewers and latrines improved, especially in schools and barracks, more care is now taken to isolate fever patients, and the practice of disinfecting is gradually coming into vogue. The question of sanitary reform is no longer reserved solely for the consideration of experts, it is a subject of general conversation. Hygiene has become popular, and even constitutes one of the planks of many a political platform. Those who knew France before the Exhibition of 1878 will admit that this is indeed a great change, and that the Society of Public Medicine and Professional Hygiene, which has been instrumental in bringing about this great progress, has "*bien mérité de la patrie.*"

"PERIODIC PARALYSIS."

IN the *Wiener Medicinische Presse*, No. 36, 1890, Dr. Goldflam describes a peculiar form of paralysis which is periodic, hereditary, and, according to him, auto-toxic. The case which he describes occurred in a lad aged seventeen, who, three years previously, had been attacked in the night with a sudden paralysis affecting the extremities and trunk. This lasted three days, and since then had frequently recurred, more especially in the spring of the year. The attacks generally commenced in the evening. The first symptom noticed was an almost unbearable itching over the site of the paralysis; there was always constipation. The paralysis was not absolute, the knee reflex was lessened, the plantar reflex lost; sensibility was not affected. There was no tenderness over the muscles or nerves, and no bladder symptoms. The backward and forward movements of the head were deficient. The muscles of the face, tongue, eye, and œsophagus were not attacked; speech and movements of respiration were normal. The faradaic irritability of the large nerve trunks in the upper extremities was greatly diminished during the

attacks, and slightly so in the lower extremities. There was complete absence of direct muscular irritability. Reaction to the galvanic current was also considerably weakened. The attack lasted forty-eight hours, and concluded with profuse perspiration. The peroneal muscles alone remained affected for some time. After the attack all the nerves and muscles responded promptly to both currents. There was at no time a rise of temperature. Examination of the blood and urine gave negative results. One of the most interesting facts in connexion with this case is that eleven other members of the patient's family were subject to similar attacks, but only on the mother's side; the father's family was completely free. The hereditary character of this disease followed no regular course; occasionally all the females were attacked, leaving out the males, and sometimes the reverse was the case. The frequency of the attacks in the different sufferers also varied considerably, but they did not seem to affect the ordinary duration of life. Dr. Goldflam has collected several such cases from medical literature, and the following is a summary of his investigations: In the intervals between the attacks there was some diminution in the electrical reaction in the smaller muscles of the hand, together with the reaction of degeneration. Although improvement occurred in most of the cases, this was interrupted by relapses. As regards the pathology of the disease, Dr. Goldflam believes that the muscles themselves are affected, or, perhaps, the nerve-endings, such as occurs in poisoning by cocaine. Experiments were made by injecting into rabbits the urine of the patient between and during the attacks, with the result that in the latter case the secretion possessed distinctive toxic properties, although actual paralytic attacks were not induced. Further investigations showed that the organic constituents of the urine contributed the toxic material, perhaps owing to the condition of the muscles. In one case the attacks were successfully warded off for two months by small daily doses of atropine.

"PHYSIOLOGICAL ABERRATIONS IN EUROPEAN INHABITANTS OF THE TROPICS."

REFERRING to the observation of Braco, that an adult of normal development weighs as many kilogrammes as he measures centimetres after deduction of the first metre, Dr. Glogner, in a contribution to Virchow's *Archiv* under the above heading, contends that Braco's law does not apply to the European inhabitants of the tropics, because numerous examinations have proved that they almost always lose weight in proportion to their height. Dr. Glogner believes that part at least of the decrease in weight is due to a decrease of fat, the result of food which is not so rich in fats as that in Europe. He also found another difference in the temperature of the body, which from seven to nine o'clock in the morning was half a degree centigrade higher in the tropics than in Europe. Another interesting observation was that, with the same temperature, warmth radiates more easily from the native than from the European, possibly through the stronger pigmentation of the skin in natives and the greater changes of the temperature in Europe.

SUICIDE AMONGST GERMAN CHILDREN.

A CURIOUS return has been made concerning some 289 instances of suicide by school children in the German Empire during the six years 1883 to 1888 inclusive. The interest of the return centres in the motives assigned for these extraordinary acts. Among the cases which could be so explained the largest proportion appear to have been attributable to fear of punishment. This, perhaps, might have been expected, nor is it altogether surprising that such extreme terror should be chiefly exhibited among pupils of the elementary schools. The fact that 20 per cent. of all the collected cases fall into this particular class should, however, afford food for reflection. It is certain that undue severity has been practised, or, at least, undue apprehension has been aroused, in every one of these instances, seeing that the little victims were so far thrown off their balance by it as to be driven to the extremity of suicide. It would be unjust to assume that for these exaggerated fears the teachers are wholly, or even mainly, responsible; but, on the other hand, no really efficient teacher would ever leave upon a child's mind an impression so horrible as to precipitate such a crisis as this. The child who takes his own life rather than face an angry teacher must believe, rightly or wrongly, in the ferocity of the teacher; and it is much to be feared that children of tender years, even when they are not so terror-stricken as this, are apt to nurse a suspicion that most strangers and some friends—the teacher in particular among the latter—are human wolves. To eradicate this mischievous misapprehension ought to be one of the first tasks of a successful preceptor. Among the high school pupils the suicides are almost exclusively boys, and here the most common motive is dread or disappointment in connexion with examinations. Mental derangement and thwarted ambition come next in order, while precocious sentiment claims its share to the extent of four boys and one girl, whose unhappiness is recorded as due to *une affaire de cœur*. It is some satisfaction to be able to add that these emotional young people were all past the elementary school stage.

INOCULATION BY MOSQUITOES AGAINST YELLOW FEVER.

DRS. FINLAY and DELGADO of Havana have published in the *Revista de Ciencias Médicas* some statistics of their practice of inoculating persons newly arrived in Cuba against yellow fever by means of mosquitoes which have been caused to contaminate themselves by stinging a yellow fever patient. These observations have been carried on for the last ten years, and, in addition to a certain number which are still incomplete, may be said to consist of fifty-two cases of mosquito inoculation which have been fully followed up. Of these, twelve experienced between the fourth and the twenty-sixth day after inoculation a mild attack of yellow fever, with or without albuminuria; twelve experienced no symptoms of yellow fever either within twenty-five days after the inoculation or during three years subsequently; twenty-four experienced no symptoms within twenty-five days, but contracted a mild attack before the end of three years, either uncomplicated by albuminuria altogether or with only a very transient appearance of it; three who had had no symptoms within twenty-five days contracted well-marked yellow fever within th ree years one patient who had a mild attack in consequence of inoculation contracted a severe attack later on, which proved fatal: that is to say, that of those who had been inoculated only about 8 per cent. contracted the disease in a well-marked form, with a mortality of under 2 per cent. In order to enable us to appreciate the significance of these figures, the authors mention that they observed sixty-five monks who from time to time arrived in Havana, where they all lived under similar conditions. Thirty-three of these were inoculated, and thirty-two were not. Only two of the inoculated contracted well-marked attacks, which, however, did not prove fatal; whereas eleven of those that had not been inoculated were severely attacked, no less than five dying. It is remarked that inoculations performed in the cold weather are not entirely trustworthy, and that they should be followed up by a repetition in the spring; also that experience shows

that a person who has been three years in the city without contracting the disease has become "acclimatised," and is very unlikely to be attacked at a subsequent period.

THE DIAGNOSTIC USE OF KOCH'S FLUID.

PROFESSOR PICK, at a meeting of the Prague Society of German Physicians, related two cases in which injections with Koch's fluid had been useful for diagnostic purposes. One was a case of Addison's disease, and, in view of the fact that in by far the majority of such cases there is tuberculous disease of the suprarenal capsules, sometimes associated with tubercle in other organs, the injections were made to see if any reaction would follow. A first injection of 0·01 grm. was without effect, which was explained on the hypothesis that old caseous tubercular foci may not react very readily. A second injection was therefore made, and was succeeded by a severe general reaction, the patient at the same time complaining of great localised pain in the lumbar region, which was increased by pressure over the spot. The other case was one of syphilitic condylomata on the labia and the buccal and pharyngeal mucous membranes, together with extensive induration and enlargement of lymphatic glands. The patient had also for twelve years had a tuberculous warty growth (lupus verrucosus) on the arm, with cicatrices over the site of glands that had previously cicatrised. An injection of 0·01 grm. was followed in six hours by severe general reaction; and whereas the syphilitic disease showed no changes, the tuberculous area on the forearm and the glandular cicatrices on the arm became in four hours swollen, reddened, and painful, with the appearances of tender nodules hitherto unobserved.

CHOLERA INTELLIGENCE.

AT the close of the past year the state of affairs in Upper Syria still caused considerable anxiety. Beyrouth and Libania generally were still threatened by cholera; cases were recorded from Aleppo, and the disease was progressing in the direction of Masachi and Adana. The last intelligence that comes to hand points to a very marked diminution in the spread of the epidemic. In the second week of January only eight cholera deaths occurred at Aleppo, five at Adana, and two at Momouret-al-Aziz; besides which, the entire villayet of Diadbekir was reported free. At Beyrouth the condition of affairs was, however, much less promising, 139 attacks having taken place in the preceding fortnight. But on the whole a hope was locally expressed that the epidemic might possibly altogether subside before the coming spring.

A MIDWIFE COMMITTED FOR MANSLAUGHTER.

AN inquest at the Town Hall, Wandsworth, held by Mr. A. Braxton Hicks, mid-Surrey coroner, on the 22nd inst. into the cause of death of Emma Spicer, aged thirty-four, resulted in the jury finding, after a few minutes' deliberation, a verdict of "Manslaughter" against the midwife, Elizabeth Sarah Berry, the wife of a labourer. It transpired at the inquest that three deaths from puerperal fever had happened in patients under Mrs. Berry's care, and that she was distinctly warned by the medical practitioner and his assistant in the second case not to attend others. She confessed to not knowing what puerperal fever was, and as to blood-poisoning, her only idea about it was that it was connected with a cut finger. Yet this ignorant woman had attended 900 cases. A fine point in medical ethics arose out of this series of cases—viz, that of the duty of medical men who are called to see the cases, too generally when they are too far advanced to allow of much being done. Are they bound to withhold certificates? Is it their duty to inform the authorities? In the first case the medical man did not give the midwife advice to desist from practice, perhaps thinking that a single case did not show the midwife to be at fault. Another medical man advised her to desist from practice for a month or two. Another thought the period should have been two months. It is a part of the lawlessness of the midwives' position that, as they need no qualification, they are under no discipline. A medical man has no disciplinary function. It is to be remembered, however, that under the Notification Act he is bound to notify cases of puerperal fever. The sanitary authority should then become responsible for any necessary investigation into the facts. In all similar cases the medical man will do well to speak plainly to midwives as to the duty of desisting immediately from practice. The midwife may promise to obey and yet go on practising, but the medical practitioner will have done his duty.

BOYS AND FIREARMS.

ANOTHER sad accident which recently resulted in the death of a lad of eleven shows the need of something more than occasional supervision where boys are entrusted with loaded firearms. In this case a pistol held by a still younger brother aged nine, while learning to shoot, went off, with the consequence above mentioned. The lesson here taught requires no lengthy explanation. It does not, of course, imply that young lads as a rule are incapable of learning to use a gun or pistol. For some whose lot is cast in outlying corners of the colonies an early training in the management of such weapons is almost a necessity, and this fact, supported by a generally successful experience, might reasonably sanction their careful use by youths brought up in this country. What the sad occurrence does very forcibly suggest, however, is the mistake of entrusting the possible means of so much mischief to mere children. A boy of thirteen or fourteen would be quite young enough to have this privilege allowed him, and only then sufficiently old if possessed of steady nerve. The presence, in addition, of a responsible adult as instructor is always advisable, and usually indispensable, and nothing could be more hazardous than to allow firearms without such supervision to any one, however cautious, of a group of boys.

CREMATION AND ITS SAFEGUARDS.

UNFORTUNATE circumstances connected with the death of the late Duke of Bedford have brought into prominence an important question respecting the procedure of the Cremation Society, of which the late Duke was a prominent member, in cases of death from other than purely natural causes. It is clear that in the case of the Society absolute certainty as to the cause of death when other than natural can alone justify the preferential application of its method. It will therefore be interesting to examine the practical value of the safeguards adopted by the Society to prevent the chances of fallacy in a matter so important. These are three—namely: (1) the certificate of the medical practitioner in attendance on the deceased during his last illness; (2) a second independent certificate by another practitioner after careful inquiry into the circumstances attending the illness; and (3), should any doubt remain, the evidence afforded by necropsy. A further, though possibly less permanent, security exists in the resolution of the Society to refuse cremation in any case where the least doubt exists respecting the cause of death. Such doubt, as observed by Sir Henry Thompson, could remain after necropsy only in an extremely small number of cases, and would, in fact, be virtually abolished. Not actually so, however. There still remains a minimum uncertainty, and this, it is apparent, is much greater where certification, even on the very

careful system employed by the Society, is alone relied upon. The practitioner in attendance might, in spite of diligence and skill, be misled—for example, in a case where the signs of poison were obscurely blended with those of real or supposed disease. In this connexion the case of the late Mr. Maybrick is suggestive. Is it then to be believed that a second medical testimony, which would be independent of the former, could be relied on to guarantee the difference of opinion which would necessitate an appeal to the coroner? We should rather expect that this latter evidence, divested as it must be of various technical premisses which guided the statements in the first certificate, would be at best a carefully weighed and usually confirmatory assertion of moral certainty. After all it is probable that the most reliable safeguard against a too precipitate practice of cremation which we possess is to be found in the resolutions of the Society above mentioned. Cremation therefore under its present rules is certainly a valuable means of promoting accuracy in certification. As affording an absolute guarantee of such accuracy it cannot be depended on, while it must in all cases destroy every trace of morbid or mischievous agency contained in the tissues. While therefore we freely admit its practical security against any miscarriage of justice in the vast majority of cases, we cannot admit that it stands in this respect on a level exactly so high as the practice of burial. Moreover, while we also recognise its more absolute and destructive purity in the disposal of the infectious dead, we do not see that it possesses any such advantage in comparison with burial in other cases, provided that burial be conducted, as it increasingly is conducted, on a rational or "earth to earth" system.

THE DISSEMINATION OF TUBERCLE UNDER KOCH'S TREATMENT.

THE important and suggestive statements made by Prof. Virchow upon the possibility of the use of Koch's remedy being the means for the dissemination of tubercle throughout the body by the liberation of bacilli from a localised focus, seem to receive some confirmation from the discovery by Dr. Liebmann of Trieste (*Berl. Klin. Woch.*, No. 4, 1891) of tubercle bacilli in the blood of patients under this treatment. The method employed was to carefully disinfect by hydrochloric acid and alcohol the cover-glasses &c. employed, and to take a drop of blood from the finger, previously thoroughly cleansed with pure alcohol and ether, and the needle also having been previously heated to redness. The preparations were placed in warm carbol-fuchsine for half an hour, then washed in distilled water, stained for one minute in Gabbet's solution, and examined in water. (Dr. Liebmann used a modified Gabbet's fluid, viz., methyl-violet, 1·5 parts; absolute alcohol, 30 parts; concentrated sulphuric acid, 20 parts; and distilled water, 50 parts.) Nine cases are given; all the patients reacted markedly to small doses; and bacilli, sometimes granular or broken, were to be found in the blood on the evening of the day of the injection or the next day, but they disappeared if the injection was not repeated. Dr. Liebmann states that he could never find bacilli in the blood of tubercular patients not treated by this method, and considers his observation to prove that the employment of Koch's remedy may lead to the entrance of bacilli into the blood in patients not suffering from generalised miliary tubercle. It remains to determine whether this occurs at a definite time after the injection, and for how long it may persist. Already these investigations have been repeated by Dr. Ewald at the Augusta Hospital, the preparations being heated to 110° C., and the blood taken during and after the fever, but without in any case confirming Dr. Liebmann's results.

TYPHOID FEVER IN FLORENCE.

AN Italian correspondent writes: "There is little to add to my previous communications on the appearance of typhoid fever in Tuscany, except the fact that, in Florence particularly, the malady has shrunk to proportions certainly not greater than those ever present in a populous town. On the 16th inst. the number of cases was in the ratio of 3 to 100,000 inhabitants—six patients in all out of a population of 200,000 having been, within the twenty-four hours, reported to the sanitary authority. At no time, indeed, during the last four weeks has there been enough typhoid fever in Florence to justify the alarm that existed, or the stampede that, among the American portion of the English-speaking community especially, almost emptied the hotels, if not the pensions. Many of the cases reported at sanitary headquarters were at best suspected to be of the nature of typhoid fever; some of them turned out to have quite another origin. All the same, the measures set on foot by the municipality to secure absolute purity of drinking-water have not been relaxed, and the whole city, in every hygienic aspect, is now under a surveillance to which, if the truth must be told, it has long been a stranger. A laudable endeavour to minimise the sufferings of the poorer typhoid fever patients has been the formation of a committee to supply them with appropriate aliment, and, in the case of convalescents, to aid them with all the requisites for a complete recovery. This has become the more urgent as the cold during the last three or four days has been Siberian in its intensity, and the misery caused among a proletariat poorly clad at the best of times and scantily provided with fuel proportionately severe. With ice-floes on the Arno, and the tramontana blowing 'sharp as Shylock's knife' from the snow-clad Apennines, Florence may claim to be a 'winter city' in quite another sense than that in which she poses in fiction."

FOREIGN UNIVERSITY INTELLIGENCE.

Berlin.—Staff Surgeon Dr. Renvers has been granted the title of Professor.

Leyden.—Dr. Wijsman has been appointed to the chair of Pharmacy and Toxicology, in succession to Dr. van der Burg, deceased.

Munich.—Professor Trendelenburg of Königsberg has accepted the chair of Surgery, vacant by the death of Professor von Nussbaum.

St. Petersburg (*Medico-Chirurgical Academy*).—Dr. Cheltsoff has been recognised as *privat-docent* in Medicine.

Valladolid.—Professor Garín of Valencia has gained the chair of Obstetrics by competition.

Vienna.—Dr. Weidel has been appointed Extraordinary Professor of General and Pharmaceutical Chemistry.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.

THE deaths of the following distinguished members of the medical profession abroad have been announced:—Dr. Karl Reyher, from an accident while hunting. He was one of the best known surgeons in Russia. In Edinburgh, where he went in 1873 in order to study under Lister, he made many friends. He was very active during the Russo-Turkish War, and by his unwearied attention to antiseptic methods was the means of saving many valuable lives.—Dr. Dmitri Koshlakoff, formerly Professor of Medicine in the Medico-Chirurgical Academy, St. Petersburg. He had written largely on the subjects of diseases of the throat and of the kidneys.—Dr. Jules Baillarger, a

well-known French alienist, who was a favourite pupil of Esquirol, at the age of eighty-one.—Dr. Nicolas Gutierrez, founder of the Cuban Academy of Medicine, and also of the medical press of that island, the first professional journal published there being the *Repertorio Médico*, which was commenced in 1840. He commenced practice in 1821, and in 1835 was appointed Professor of Pathology in the University of Havana. Many years subsequently he became rector. He preserved his faculties to the last, and never ceased to take an active part in the work of the Academy of Medicine.—Dr. Augustin W. Reyes, a well-known physician and medical writer in Cuba.

AT the annual meeting of the Obstetrical Society of London, on Wednesday, Feb. 4th, there will be a ballot for the election of S. Tarnier, M.D., Professor of Obstetrics, Faculté de Médecine de Paris, as an Honorary Fellow (foreign subject), to replace Professor F. C. Faye, of Christiania, deceased. The number of foreign Honorary Fellows of the Society is limited to ten. At the same meeting, after the address of the President, a discussion will take place on the Midwives' Registration Bill.

DR. TARNOWSKY, professor in the St. Petersburg Medical Academy, has published a work on "Prostitution and Abolismus," in which he contends that prostitution should be regulated by law, and points to the state of this country as a warning to those who on the Continent favour the doctrine of "abolismus"—that is to say, the abolition of all State regulation.

THE death is announced of Dr. Warlomont of Brussels, whose work in connexion with the advocacy of the use of animal lymph in vaccination is well known to the medical world. As an ophthalmologist his skill and experience were of no mean order. Dr. Warlomont was one of the chief organisers of the International Medical Congress, held in Brussels in 1874.

WE are informed that Dr. Prowde, the medical officer of the Sunderland Union Infirmary, has received from Berlin a supply of Koch's fluid, and that it will be employed on several suitable patients who are at present under his care in the infirmary.

THERE will shortly be published (Springer, Berlin) a first series (ending Dec. 31st, 1890) of official reports on the action of Koch's remedy for tuberculosis, from the clinics, polyclinics, and pathological institutes of the Prussian Universities.

THE Milan Correctional Court is engaged in trying a medical man for having caused the death of five persons who had been bitten by rabid dogs by inoculating them according to a system based on Dr. Ferran's method for cholera.

THE Russian Government has prohibited the sale of "spermin" by pharmacists, even when prescribed by a medical man.

MR. SYDNEY JONES has retired from the post of surgeon to St. Thomas's Hospital, his term of office having expired. Mr. Croft now becomes senior surgeon.

THE Council of the Metropolitan Hospital Sunday Fund have received a further donation of £100 from Ludwig Mond, Esq.

THE DEBATE ON KOCH'S REMEDY AT THE BERLIN MEDICAL SOCIETY.

THE discussion[1] on Professor Fraenkel's paper at the Berlin Medical Society was further continued on the 21st inst.,[2] the first portion of the proceedings being again taken up by demonstrations of cases subjected to the treatment, and specimens of organs from those who had been treated.

Dr. ALBRAND exhibited a case of Tuberculosis of the Conjuctiva—a very rare affection—from the clinic of Professor Schöler. The tuberculous infiltration was confined to the conjunctiva of the right upper eyelid, some glands in the cheek, the preauricular glands, and those at the angle of the jaws. The patient was a girl of seventeen, with some family history of lung disease, but having no lung symptoms herself, and the disease commenced at the beginning of 1890. In the summer she was under the care of Prof. Uhthoff, who excised a portion of the growth, and proved its tuberculous nature. The condition at the time of commencement of treatment by injections of Koch's fluid (in December) was some redness and swelling of the upper eyelid near the outer canthus, where there was a scar surrounded by greyish-yellow tuberculous nodules. At this time, too, slight dulness was detected at the apex of the right lung, but no respiratory symptoms, beyond some dyspnœa and cough, were excited by the injections. The dose of the injections ranged at first from 0·015 to 0·04 grm., the degree of general and local reaction increasing with the dose. Together with increased local swelling and redness, there appeared an increase in the tuberculous nodules, which became confluent. Gradually these conditions subsided, until a dose of 0·15 grm. produced no general or local reaction, the conjunctiva became pale, and the nodules disappeared. The affected glands shared in the local reaction, and then some suppurated, and others were treated by scooping. They were found to contain abundant bacilli.

Professor VIRCHOW showed specimens from the body of a man, aged fifty-four years, who was admitted into La Charité last October for pleurisy, with effusion. From Oct. 10th to Nov. 26th he remained in a satisfactory state; no fever or loss of weight. Then injections were commenced, five in all, each five milligrammes, and each time with marked reaction (temperature 104°). From this time he began to lose weight, and after the last injection to have continued fever. He died, and the examination made that morning (21st) showed, in addition to old induration at both apices and the remains of pleurisy, a widespread miliary tuberculosis in lungs, spleen, kidneys, and liver.

Dr. G. BEHREND showed a case of Lupus, premising that lupus was a local tuberculosis of the skin which may often arise from infection of eczema in early life. The patient had suffered for six years with pulmonary and laryngeal tuberculosis, the latter having been cured by the local application of iodo-glycerine and sozoiodol. The affection for which he was now about to be treated by Koch's remedy was a lupus arising out of inoculated tubercle of the hand.

Dr. EWALD resumed the debate on Professor Fraenkel's paper, confining himself to the cases treated at the Augusta Hospital under his personal supervision. These amount to 114, and there had been used no less than six flasks and a half of the "lymph"—i.e., about 32,000 milligrammes in all. On no single occasion had any inflammation or suppuration occurred at the site of injection. Of these cases thirty-six had been discharged, and five had died. Two of the fatal cases were advanced in the disease, and were treated during the early period when "enthusiasm" was at its height; but they only received one or two injections, being obviously unsuitable. Another was a severe case of laryngeal and pulmonary phthisis, which succumbed five days after the injections were left off. In the other two cases there was a probable connexion between the injections and the fatal result. One was a case of phthisis with amyloid nephritis; the temperature rose rapidly the day after 1 milligramme injection; there was profuse hæmoptysis and death the following day. The other was a man with slight apex affection, who came from America for treatment. He was very carefully examined by some English physicians then in Berlin, and only slight

[1] See THE LANCET, Jan. 24th, p. 215.
[2] Vide Berl. Klin. Wochensch., No. 4, 1891

infiltration of the right apex was detected. He had a number of injections, up to 10 milligrammes, with the ordinary reactions, and felt well, when he was suddenly attacked with hæmoptysis, and at the same time signs of excavation appeared in the opposite lung. In one of these cases there was a recent eruption of tubercles on the pleura, such as had been described by Professor Virchow. He (Dr. Ewald) did not feel competent to judge whether this was *post hoc ergo propter hoc*, but Professor Virchow's statement had strengthened his feeling that the condition was a result of the injection. Of the thirty-six cases which had been discharged, seven of them had left before completing the full series of injections—viz, up to 100 milligrammes; some because they were not satisfied with the rate of progress; and four owing to their hopeless condition from the first. Dr. Ewald then read reports furnished by patients since leaving hospital upon their condition of health, especially as regards cough, expectoration, night-sweats, weight, and general state, the majority being favourable on the whole; but he gave some reports in which there had been retrogression in one or other of these points. However, he remarked that the actual state is a different thing from the reported condition. For, although an improvement in cough and expectoration is necessarily associated with diminution in râles, yet he was bound to say that, so far as regards the percussion signs, no case had since his discharge shown any change from the conditions carefully noted just before he left the hospital. This does not apply to pleuritic effusions, which were rapidly absorbed. He pointed out that a "clearing up" of dulness, noted by many, does not necessarily imply the cure of a tuberculous process. Such a change may be owing to the absorption of intra-alveolar products, or the re-entrance of air into parts previously closed by exudation; also to the formation of cavities. The two factors in phthisis—intra-alveolar exudation and inter-alveolar tuberculous formation—are on a different footing in this respect; and a clearing up of dulness due to the removal of the former may not prove in the least that the latter has also disappeared; on the contrary, the curative process in tubercle consists in the production of new tissue, the inspissation and calcification of the contents of cavities, and destruction of the affected part. These changes give rise to dulness and not to improved resonance; and therefore a "clearing up" of dulness does not mean the cure of the tubercle. Moreover, the lesions are not superficial, but more or less concealed by a layer of healthy tissue. Hence he affirmed that *he had not yet seen one case which he could say was cured.* The same applies to the finding of bacilli, which varies so much with the conditions of the secretion. Bacilli may be undetected for a long period, and then suddenly appear in large numbers. Turning to the reverse of the medal, he said that there were undoubtedly unfavourable effects as well as favourable. He did not deem it necessary to recount all the severe and even fatal accidents which had been noted in the course of the injections, sometimes of metastatic nature, at others due to the direct injuries caused by the hyperæmia of the affected parts. But he referred to a paper which was about to appear in the *Berliner Klinische Wochenschrift*, which contained statements that, if confirmed, were of the highest importance. Dr. Victor Liebmann of Trieste had discovered tubercle bacilli in the blood during and immediately after injections. These observations had been repeated at the Augusta Hospital, with negative result. Summing up, he said the conviction was borne on him that *in no single case*, with the exception, perhaps, of a few in the very earliest stages, and then not with positive certainty, *can one say how the case will go, either in respect to the character of the reactions, or to the ultimate result.* As he had remarked in a recent debate at the Hufeland Society, the cases show a most variable character. Dr. P. Guttmann had said that only slight cases should be injected, and that no cases with severe signs, whether afebrile or febrile, should be treated. In many cases the slight character could be positively affirmed; but there were others—for instance, where the disease was in the centre of the lung—where this was not possible. Even in Moabit such cases occurred, as shown by the case of "cured" intestinal tubercle brought forward by Dr. Guttmann. According to present experience, the physician is in the position of an operator who cannot foretell the issue of a difficult operation. The patient must be told that the remedy may produce the most severe effects, and even cause a fatal result. A case, to be published in the *Berliner Klinische Wochenschrift*, shows the supervention of tubercular meningitis with comparatively slight lung affection. Again, there was one series of effects not hitherto mentioned—viz, cases in which, free from fever at the commencement of treatment and in which for some time only slight reactions were produced, a permanent fever had been set up and the injections had to be abandoned. Here, again, one cannot absolutely affirm the *post hoc ergo propter hoc;* but the probability of a causal relationship was very great. Still, it can be said that in a certain number of cases there was a notable improvement, and that in a shorter time than ever observed after the use of any other remedy. Further, by careful selection of cases and judicious treatment the chances of a favourable issue were increased, although in some it is impossible to foretell what may happen. The patient must decide whether he will undergo the treatment or not. Dr. Ewald concluded by quoting the authority of Fraentzel on the marked improvement in phthisis from treatment by creasote in a report published by him in 1887, and compared the results then given with those affirmed in the reports he had just read of the cases treated by Professor Koch's remedy.

Dr. JAMES ISRAEL gave an account of 36 cases of surgical tuberculosis treated by the method. Subtracting 2 cases of cured joint resection which did not react, and 9 in which the treatment did not extend beyond twenty days, he said that one of the remainder (a case of hydrops tuberculosus genu) was cured; but before beginning Koch's remedy the joint had been twice injected with iodoform glycerine. Two patients had died, both being affected with extensive lung disease; one was a case of lingual tuberculosis, the other of synovial tubercle of the elbow. Five cases had not shown the slightest local reaction or any therapeutic effect from the injections, but in all there had been a general reaction. These were—(1) lupus of face, pulmonary tubercle; (2) tuberculous ostitis of wrist; (3) synovial tubercle of elbow, pulmonary tubercle; (4) tuberculosis of bladder; (5) tuberculosis of bursa over trochanter, pulmonary tubercle; cases in which the total quantity injected varied from 931 milligrammes to 43 milligrammes. A case of tubercle of prostate had no reaction, either general or local, after injections up to 4 c.g. Of the remaining eighteen cases, six had notably improved—viz., two cases of facial lupus, one of fistula after old hip resection, one of tubercular epididymitis, one of lingual tuberculosis (but fatal from lung disease), and one of tubercular teno-synovitis. Three cases of joint disease primarily cured by excision gave very slight reactions without notable change. The rest either showed no improvement (three of coxitis and two of spondylitis), or had relapses (one a resected knee-joint, and one caries of skull), or grew worse (one tuberculous testis, one arthrectomy of hip, and one apparently healed excision of hip). Summing up his experience, he said that one of the cases of lupus of the face showed no improvement, although the dose had been raised to 0·1 gramme, the total amount used being 896 milligrammes. Microscopic examination of excised nodules showed giant cells and no regressive change. In another case, a cancroid engrafted on the lupoid tissue had rapidly increased under the injections. In another, where the lupus had been excised, and a plastic operation performed, the injections caused the development of fresh nodules beneath the healthy skin. Only one case of joint disease, that of hydrops tuberculosus genu, had a good result. After each injection there was increased effusion, which ultimately became absorbed when the reactions ceased. In some cases latent foci in the bones seemed to be excited into activity; in others fresh disease appeared to be started. Details of some of these cases were given, and reference was made to two cases of tuberculous epididymitis. Dr. Israel's conclusions were: (1) The remedy, even apart from caseous foci, does not in all cases act on tuberculous tissue; (2) the remedy does not invariably excite obvious necrosis, but inflammation; (3) there is no proportion between the degree of the local reaction and the intensity of the general reaction; (4) the degree of local reaction is no measure of curative effect; good results may ensue upon slight local reaction; in spite of marked local reaction no curative effect may be observed. Sufficient time had not elapsed to enable a judgment to be formed of the therapeutical value of the remedy in surgical cases.

THE MIDWIVES' REGISTRATION BILL.

A MEETING of registered medical practitioners was held at the Grosvenor Hotel, Victoria Station, on Saturday, Jan. 24th, at 4 P.M., for the purpose of taking steps to oppose the Midwives' Registration Bill, which is down for second reading in the House of Commons. The meeting was not very numerously attended. Mr. John Dewar occupied the chair.

Dr. CRAWFORD moved: "That this meeting strongly disapproves of the Midwives' Registration Bill now before Parliament, as it attempts to dissociate midwifery from medicine and surgery in the persons of unqualified midwives. This being so, it is wrong in principle, and will consequently be fraught with danger to the public, and cannot but be opposed to the high aims of the medical profession. At the same time this meeting feels the great need there is for a better system of medical aid and competent nursing of necessitous poor women, during and after labour, in town and country districts." In speaking to the resolution, he felt that these subjects should not be separated as this Bill proposed to do. If it passed, they would have midwives practising independently of medical men. This he objected to. He maintained that in all such cases the medical man should be the first to be called to the case, and not the last, as this Bill proposed. In cases of labour, should a midwife be engaged in preference to a medical man, she herself would require an assistant to attend to the mother and the child, and would consequently be in the same position as the medical man at present is, and the expense would be the same in both cases. General practitioners would see that this would tend to cut up their practice, and that would be very much against their own interests and also destroy public confidence in them. The high aim of the medical profession is to uphold the unity of the profession as practitioners of medicine, surgery, and midwifery. His notion was that there should be trained nurses in every district to look after all cases of illness, but that they should be under the immediate supervision of registered medical practitioners. He pointed out that registration was not a cure for the "old women" who were called in to cases now and then, as those who preferred them could still have them.

Mr. W. E. G. PEARSE seconded the motion, and fully concurred with its views.

Dr. H. A. DES VŒUX could not support a motion which thought the Bill to be wrong in principle, or fraught with danger to the public. At present poor women were attended by unqualified midwives—that is, by women only fit for charing work in a house, but totally unfit to take even a simple case of midwifery. Unless registration were substituted, the poor in the towns and rural districts would never have any better attendance. Midwives, good or bad, would always be called in to attend the poor, and it seemed to him that by being registered they would not be such a danger to the public. What was wrong with the Bill? If it decreased mortality, which must follow upon increased education, he could not see how it was opposed to the high aims of the profession. He gave illustrations of the kind of questions put to candidates by the Obstetrical Society, and proceeded to define natural labour, which the Bill permitted the midwives to deal with only. Midwives were taught to recognise natural labour, and those whom he taught had a whole lecture upon cases which they ought not themselves to attend.

Mr. JOHN CAHILL pointed out that the Bill before Parliament did not propose to draw distinctions between the different cases of labour, but to insist that no women shall legally practise as midwives without having received a certain minimum of practical education. This was a very wise provision for many thousands of women in this country. There was no doubt that uneducated midwives attended a vast number of lying-in women, and in a large proportion of cases the attendance was successful. Certain cases would arise with which the midwife was unfit to deal. The Obstetrical Society wished that those women should have sufficient education to know when a doctor should be called in. In poor districts it would enable medical men to relegate to the hands of midwives a proportion of the lowest class of patients upon whom a great deal of labour and time has to be expended gratis. The profession were bound to consider any method which tended to the greater good of the health of the community. He thought the Act would be a valuable measure for the protection of a class of women whom they, in the west of London, knew very little of. He therefore moved as an amendment: "That this meeting of medical practitioners recognises with much satisfaction the circumstance that it appears likely that the efforts of the Obstetrical Society to improve the education of midwives will receive the practical support of Parliament." Dr. Harry Scott seconded the amendment.

Mr. JOHN DEWAR (chairman) thought that London consultants were not very familiar with the details of the work done by midwives. In connexion with public dispensaries he had seen a great deal of their work, and he could not remember any serious injury as having occurred in their practice, although they were not registered. They had no special training beyond attending a lying-in hospital for two months or so, and had gone before the public with a certificate. He could not therefore see the advantage that would result to the public by registering them as a class of practitioners. In poor districts there were very many struggling practitioners who would be glad to attend cases for the same fee as midwives charged. Midwives, if registered, would regard themselves as a class of practitioners, and, so far from sending for a doctor in difficult cases, it was just likely that they would themselves try to remedy those conditions which were dangerous to both mother and child. The poor in the district would begin to think that there was no necessity for a doctor at all, the poor women themselves would not be benefited, and the general practitioner would be very much injured. He agreed that practitioners had to consult the safety of the public before their own well-being. But he asked, Would registration lend any safety to the public which at present the public did not possess? He maintained that from the very fact of their better education they would attempt to relieve patients whose condition was critical and demanded skilled assistance, and then, as now, when it was too late the practitioner would be called in. The profession ought to be considered, when it was remembered that in every parish and small village in England there was a practitioner able and willing to attend to the patient. He could not see the necessity for encouraging a class of women already far too numerous. The amendment was then put to the meeting, when three voted in its favour, and the motion then was declared carried.

Dr. CRAWFORD next submitted the following motion, to the effect: that this meeting calls upon the direct representatives of the General Medical Council and others who have maintained that medical students after a four years' medical education are imperfectly educated in the subject of midwifery, and that their attendance on lying-in women is fraught with danger to the public, to oppose a Bill which legalises the attendance of women, designated midwives, at the bedside of puerperal patients, notwithstanding the fact that their imperfect education has only extended over a period of three months.

The motion was agreed to, and the meeting terminated with a vote of thanks to the chairman.

A petition against the Bill was lying on the table, and was signed by most of those present. It has now been forwarded to Mr. Burdett Coutts, M.P. for Westminster, signed by about thirty practitioners in the district.

THE MEDICAL DEFENCE UNION.

A MEETING of the Medical Defence Union was held on Wednesday last at 429, Strand, when the annual report for the year ending Dec. 31st, 1890, was considered. The President, Mr. Lawson Tait, occupied the hair.

In presenting the report, Mr. Lawson Tait thought that very few but would agree that the growth of the Union had been very satisfactory, and equally so was the amount of work done by it. All the undertakings they had engaged in so far, with one exception, had been uniformly successful. In financial ability and in range of influence the Union had steadily developed. A matter which had given the council anxiety and which was still in hand was the strange way in which the Union was hampered in the metropolitan area of its work in the prosecution of irregular practitioners, by the fact that as the law stands at present the Receiver of

Police was legally entitled to the penalties imposed, and that debarred the Union from obtaining repayment of the expenses to which it was put in these cases; so that the more the Union succeeded in its work the more they were hampered by this enactment. The council had determined to approach the Home Secretary in order to find out whether this condition of things could not by some arrangement be altered, inasmuch as its existence rendered the action of the Union a dead letter. He believed a private arrangement of the Home Office with the police would be sufficient for the purpose, and hoped within a short time to report to the council that a private arrangement had been made.

Dr. MEAD (Newmarket) suggested that it would be much more convenient to the members of the Society if the chief offices of the Union were removed to London; and after some discussion

Mr. TAIT pointed out that the branches of the Union were perfectly autonomonic. They ought to wait until they were in a very flourishing condition, with a secretary at £500 a year, and then it would not matter a straw where the offices were. The report was approved.

In receiving the financial statement the CHAIRMAN referred to the item under the heading — To law and detective expenses (including costs of reconstruction, £464 16*s.* 3*d.* The chairman pointed out that these were not the costs which had been incurred in a single year, but represented the sums paid to the lawyers for three years' work.

On the motion of Mr. FELCE, it was agreed that the president and other officers should press upon the Home Secretary to take such action as would enable the fines in question to be paid over to the General Medical Council.

Formal votes of thanks were awarded to THE LANCET and various other journals for publishing from time to time statements in connexion with the work of the Union.

Dr. R. R. RENTOUL brought forward the subject of the Midwives' Registration Bill, and a discussion followed.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 5850 births and 4816 deaths were registered during the week ending Jan. 24th. The annual rate of mortality in these towns, which had declined from 28·7 and 27·3 per 1000 in the preceding three weeks, further fell to 25·1 last week. The rate was 25·7 in London and 24·6 in the twenty-seven provincial towns. During the past three weeks of the current quarter the death-rate in the twenty-eight towns averaged 26·8 per 1000, and exceeded by 3·0 the mean rate in the corresponding periods of the ten years 1881–90. The lowest rates in these towns last week were 13·8 in Hull, 15·9 in Bradford, 18·2 in Derby, and 20·8 in Leicester; the highest rates were 29·9 in Bolton, 31·6 in Wolverhampton, 38·8 in Preston, and 39·0 in Halifax. The deaths referred to the principal zymotic diseases, which had been 485 and 404 in the preceding two weeks, were again 404 last week; they included 133 from measles, 115 from whooping-cough, 50 from diarrhœa, 44 from scarlet fever, 36 from diphtheria, 26 from "fever" (principally enteric), and not one from small-pox. The lowest death-rates from these diseases were recorded in Cardiff, Plymouth, Hull, and Huddersfield; the highest in Bolton, Manchester, Birkenhead, and Halifax. The greatest mortality from measles occurred in Leicester, Leeds, Birkenhead, Oldham, Brighton, Bolton, and Halifax; from scarlet fever in Halifax; from whooping-cough in Preston, Halifax, Newcastle-upon-Tyne, and Birkenhead; and from "fever" in Wolverhampton and Birkenhead. The 36 deaths from diphtheria included 17 in London, 3 in Manchester, and 3 in Salford. No death from small-pox was registered in any of the twenty-eight towns, and no small-pox patients were under treatment either in the Metropolitan Asylum Hospitals or in the Highgate Small-pox Hospital on Saturday last. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 1427, and showed a further considerable decline from recent weekly numbers; the patients admitted during the week were 103, against 92 and 112 in the preceding two weeks. The deaths referred to diseases of the respiratory organs in London, which had increased in the preceding eight weeks from 375 to 1018, declined last week to 845, but exceeded the corrected average by 252. The causes of 114, or 2·4 per cent., of the deaths in the twenty-eight towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Norwich, Plymouth, Derby, Birkenhead, and Sunderland. The largest proportions of uncertified deaths were recorded in Liverpool, Salford, Brighton, and Sheffield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 28·8 and 27·8 per 1000 in the preceding two weeks, further declined to 24·9 during the week ending Jan. 24th, and was slightly below the rate that prevailed during the same period in the twenty-eight large English towns. The rates in the eight Scotch towns ranged from 13·6 in Greenock and 18·2 in Dundee to 31·0 in Glasgow and 40·4 in Paisley. The 651 deaths in these eight towns showed a decline of 78 from the number in the preceding week, and included 27 which were referred to whooping-cough, 18 to scarlet fever, 10 to diarrhœa, 9 to diphtheria, 7 to measles, 5 to "fever," and not one to small-pox. In all, 76 deaths resulted from these principal zymotic diseases, against 68 and 53 in the preceding two weeks. These 651 deaths were equal to an annual rate of 2·9 per 1000, which exceeded by 0·8 the mean rate last week from the same diseases in the twenty-eight English towns. The fatal cases of whooping-cough, which had been 19 and 16 in the preceding two weeks, rose last week to 27, of which 10 occurred in Glasgow, 9 in Edinburgh, 4 in Dundee, and 3 in Leith. The deaths referred to scarlet fever, which had been 8 and 7 in the previous two weeks, rose again to 18 last week, and included 14 in Glasgow and 3 in Edinburgh. The 9 fatal cases of diphtheria corresponded with the number in the preceding week; 5 occurred in Glasgow and 2 in Edinburgh. The 7 deaths from measles showed a further decline from the numbers in recent weeks, and included 5 in Glasgow and 2 in Greenock. Of the 5 fatal cases of fever 3 were recorded in Edinburgh. The deaths referred to diseases of the respiratory organs in these towns, which had been 240 and 228 in the preceding two weeks, further declined last week to 210, but exceeded by 29 the number in the corresponding week of last year. The causes of 55, or more than 8 per cent., of the deaths in the eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 36·0 and 37·1 per 1000 in the preceding two weeks, further rose to 38·4 during the week ending Jan. 24th. During the first three weeks of the current quarter the death-rate in the city averaged 37·2 per 1000, the rate during the same period being 28·0 in London and 20·1 in Edinburgh. The 260 deaths in Dublin showed an increase of 9 upon the number in the preceding week, and included 5 which were referred to "fever," 2 to diarrhœa, 1 to whooping-cough, and not one either to small-pox, measles, scarlet fever, or diphtheria. Thus the deaths from the principal zymotic diseases, which had been 15 and 9 in the previous two weeks, further declined last week to 8; they were equal to an annual rate of 1·2 per 1000, the rate from the same diseases being 1·7 in London and 19·7 in Edinburgh. The deaths referred to different forms of "fever," which had been 4 in each of the preceding two weeks, rose to 5 last week. The fatal cases of whooping-cough, which had been 6 and 2 in the previous two weeks, further declined to 1 last week. The 260 deaths in the city included 40 of infants under one year of age and 92 of persons aged upwards of sixty years; the deaths of infants showed a slight decline, while those of elderly persons showed a further increase upon those recorded in recent weeks. Three inquest cases and 54 deaths from violence were registered; and 72, or more than a fourth, of the deaths occurred in public institutions. The causes of 40, or more than 16 per cent., of the deaths in the city were not certified.

Correspondence.

"Audi alteram partem."

FAILURE OR CURE?

To the Editors of THE LANCET.

SIRS,—For several years past I have taken some pains to condemn the unnecessary performance of mutilating operations upon women, and have endeavoured to caution the rising generation of medical men against any teaching or example which might tend to lower the standard of surgical ethics and endanger the character of British surgeons. Last month, at the College of Surgeons, I expressed my fear that the operation of oöphorotomy has been "performed without due explanation of the consequences; that advantage has been taken of the susceptible and impressionable condition of women in certain states of health to overstep the bounds of deliberative and consultative practice; that recoveries from the operation have been untruly tabulated as cures of the diseased condition; and that failures have not all been recorded." On the 7th of this month, after Dr. Playfair's paper on "Removal of the Uterine Appendages in Cases of Functional Neurosis," I read extracts from a paper by Dr. Ross of Toronto on "The Failure of the Removal of the Tubes and Ovaries to relieve Symptoms," in which he says, "Many cures I hear of as cures are not cures"; and in support of that statement I referred to one (among several others "almost as unsatisfactory") which had been reported as a "practical cure" less than a month after the operation, but has proved to be "a deplorable and disastrous failure." A letter from the operator in this case appears on page 221 of your last number, in which he refers to the original account of the case in the British Gynæcological Journal for 1888, vol. iv., p. 457. The following is this account given at the meeting of the British Gynæcological Society, Dec. 12th, 1888:—

"Mr. Lawson Tait said he had a specimen to show which bore very much upon what had just been said; he showed the appendages from a lady, thirty-nine years of age, with a very remarkable history. She had been married at the age of seventeen or eighteen, and had two children within twenty months of her marriage. Soon after her second confinement she contracted gonorrhœa from her husband, and she had never known what it was to be well since. She had led a life of single misery for several years. Then she married again, but her health did not improve, and she never became pregnant by her second husband, so that ever since nineteen or twenty she had been absolutely sterile. During the last seven years she had been the patient of a distinguished gynæcological baronet, who had, however, failed to relieve her. Ultimately she had been referred to him and he had operated. She had double pyo-salpinx of old standing, and it was very difficult to say which was tube and which was ovary. There were abscesses in both ovaries, and if he had attempted to tap them from the vagina, he would have been obliged to tap several cavities. Instead of doing anything of the kind, he opened the abdomen a month since, and the patient was now practically cured. A case like that was worth a dozen hypothetical imaginations. There was a woman who had been an invalid for years, who could have been relieved at any time, who had been under the care of all the well-known specialists of London, many of whom had declared that there was nothing the matter." In the letter you published last week, the operator adds that if anybody is answerable for this failure "it is Sir Spencer Wells, who, during seven long years, treated this poor woman uselessly by pessaries &c." And he adds that the case is "not a failure," ..... the patient is "absolutely cured, for I have the diseased parts in a bottle." This lady is now in London. I have submitted the following questions to her, and I add her replies:—

1. During the seven years 1881–88 were you under my care, and did I fail to relieve you?—*Reply:* I consulted you in 1879, after Dr. Palfrey had failed to do me any good. You operated on me in the summer of 1879; I was in good health after that until you again operated on me in 1880. After that I enjoyed good health until 1887.

2. Had you before 1888 been "an invalid for years," or "led a life of single misery for several years?"—*Reply:* Except between my second confinement and 1879, I had been in good health.

3. After your second confinement had you "been absolutely sterile"?—*Reply:* I had two children after my second confinement—one born dead, one lived two weeks, and I had one miscarriage at three months.

4. Have you been "under the care of all the well-known specialists in London, many of whom declared that there was nothing the matter"?—*Reply:* You are the only medical man I consulted in London between 1879 and 1888, and no one ever told me that there was nothing the matter.

5. Did I treat you "for seven long years by pessaries &c."?—*Reply:* No, you never used a pessary; nor, after your second operation in 1880, treated me except for slight ailments, and that seldom. In 1887, while you were abroad, I was treated by Mr. Smith of Brighton after a carriage accident and was recovering when you returned.

6. Remembering your state before and after the operation performed at Birmingham in November, 1888, has that operation proved to be, in your opinion, a "practical cure" or a "deplorable and disastrous failure?"—*Reply:* A decided failure.

I need only add to this the fact that the operation I performed in 1879, assisted by Mr. Thornton, was amputation of part of the elongated cervix uteri. Dr. Palfrey had repeatedly injected solution of perchloride of mercury into the substance of the cervix, and it was feared that the disease was papilloma or epithelioma. Examination proved that it was simple hypertrophy of the utricular glands, or adenoma. About a year after this amputation, the remains of the cervix showed some tendency to enlarge and proliferate, and I destroyed the left side by the actual cautery. For two or three days after this there was a good deal of pain and some fever, but they soon subsided, and until 1887—about seven years—the patient was as well as most people, and for several months after her second marriage, in February, 1888, remained in good health, riding, rowing, and walking four or five miles without fatigue. Since the operation in November, 1888, she has been a confirmed invalid. The failure to the husband has been "disastrous" in expenditure; to two devoted daughters in health and anxiety from continuous nursing; to the patient "deplorable" in more than two years' almost continuous suffering and shattered health. It is a very poor consolation to her to be assured that she is "absolutely cured" because her "diseased parts are in a bottle."

I am, Sirs, yours truly,
T. SPENCER WELLS.

Upper Grosvenor-street, Jan. 26th, 1891.

THE LATE SURGEON-GENERAL BALFOUR AND THE CONTAGIOUS DISEASES ACTS.

To the Editors of THE LANCET.

SIRS,—I should like you to add to your biography of the late Dr. Graham Balfour that he was a very important member of the Skey Committee of 1867, which was appointed to investigate the question of venereal disease as it affected the army and navy. Dr. Balfour came to the sittings prejudiced (as he informed us) against any State interference with women or any more stringent regulations for the soldier. At the closure of the committee, however, his convictions were quite changed, and he saw the necessity of legislative measures for the control of the disease. He therefore, with some slight modifications, signed the chairman's report in favour of them. He subsequently upheld the importance of the Contagious Diseases Acts, and lamented their repeal. I am, Sirs, yours truly,

Grosvenor-street, Jan. 26th, 1891. SAMUEL WILKS.

*** Dr. Wilks has usefully drawn attention to a part of the life work of the late Surgeon-General Balfour which was but casually referred to in our notice last week. Though the Contagious Diseases Acts never formed a favourite topic with the distinguished deceased, yet his convictions to the last were entirely opposed to the action of the late Government in withdrawing the protection of those measures from Her Majesty's forces. That the facts brought out in connexion with the working of those Acts were capable of changing the views of so acute and honest a reasoner as was Dr. Balfour is surely strong evidence of the unwisdom of maintaining the existing legislative inaction in regard to the means of controlling this class of contagious disease.—ED. L.

THE DISCUSSION AT THE MEDICAL SOCIETY ON THE OPERATIVE TREATMENT OF CHRONIC DISEASE OF THE UTERINE APPENDAGES.

To the Editors of THE LANCET.

SIRS,—Having unavoidably been prevented from attending the above adjourned discussion on Monday evening last, I would like, with your permission, to briefly remark on one or two points in connexion with Dr. W. Duncan's paper on the subject in question.

In the first place, with regard to Dr. Duncan's tabulated series of cases, I think it a matter for regret that no indication whatever was therein afforded as to the dates on which the operations thus recorded were performed. Dr. Duncan, in reply to an inquiry by the President as to whether the cases—numbered consecutively from one to thirty—comprised all those of the kind which had been thus treated by him, stated at the meeting on Jan. 12th[1] that "his earlier results in all cases of abdominal section had been so awful that he would not like to publish them." In other respects the cases were said to be consecutive up to the date of writing his paper. While giving Dr. Duncan full credit for the frankness of his avowal on this point, I venture to think that his omission was an unfortunate one, since statistics thus compiled cannot be of much scientific value as to the comparative risks and advantages of the operation to which they refer. If we turn back to the history of ovariotomy in this country thirty years ago we learn that what chiefly tended to establish the operation upon a firm basis as a well-recognised surgical procedure in the eyes of the profession at large was the fact that each case in the practice of Mr. Spencer Wells, whether successful or unsuccessful, was duly and faithfully recorded by him from the commencement of his work in this field; and, so far as I know, the good rule then initiated has up till now been followed by his successors when bringing forward statistical results of their work in any special branch of abdominal surgery. It seems to me that any departure from such a rule must inevitably destroy the value of statistics in any given instance, and it is therefore to be hoped that the plan here adopted by Dr. Duncan may not be followed by other operators. The remaining subject to which I would allude in connexion with this paper is the comparatively large number of operations which appear to have been found necessary in Dr. Duncan's practice for the relief of suffering presumably connected with the state of the uterine appendages. The absence already noted of any indication as to the period covered by the work recorded makes it impossible to judge as to the relative proportion which these operations might bear to the total number of Dr. Duncan's abdominal sections during the same period, or from the date when he first began to operate. On neither of these latter points, however, does his paper afford us any information.

In order to estimate the comparative frequency of these operations in other hands than those of the author of this paper I have examined the register of the Samaritan Free Hospital, with a view to ascertaining some definite information on this subject. I find that in 1890, out of a total of 141 abdominal sections, the number of operations for removal of diseased uterine appendages (one or both) was exactly fourteen—a proportionate rate of as nearly as possible 10 per cent. on the total. These figures, considered in relation to the twenty-three hospital operations recorded by Dr. Duncan—which comprise seventeen cases of complete and three of incomplete removal of the uterine appendages, to the exclusion of two cases of ovarian cyst (Nos. 5 and 17) and one exploratory operation (No. 21)—would apparently indicate one or other of two things: either that the surgical staff of the Samaritan Hospital do not frequently enough resort to operative treatment for the cure of the diseases in question, or else that the number of urgent cases of such nature, unrelievable by rest and medical treatment, who apply at the Middlesex and Waterloo-road Hospitals, is greatly in excess of those to be met with at the Samaritan Free Hospital. In my own belief neither of these interpretations can be considered correct. The true explanation lies in the spirit of restless surgery now so prevalent that, unless restrained, it will, I fear, bring into disrepute an operation which, when judiciously undertaken in properly selected instances, may prove a most valuable means of restoration to health.

I am, Sirs, yours faithfully,

Queen Anne-street, W., Jan. 28th, 1891. W. A. MEREDITH.

[1] See Brit. Med. Journ., Jan. 17th, 1891, p. 118.

ILEOSTOMY AND INTUSSUSCEPTION.

To the Editors of THE LANCET.

SIRS,—In your issue of last week, page 221, my friend Mr. Reeves gives a short description of a case in which he had performed ileostomy in a man suffering from cancer of the cæcum, on similar lines to those described by Mr. Bryant in a former number of THE LANCET. By adopting this method of treatment a fæcal fistula is formed, which is most distressing to the patient, and, being situated in the small intestine, somewhat difficult to manage. To obviate this I would strongly advocate the operation of ileo-colostomy, either by approximation of the ileum to some portion of the colon below the disease by means of decalcified bone plates as suggested and practised by Dr. Senn, or by dividing the ileum some three inches above the ileo-cæcal valve, closing the distal end and implanting the proximal end into the colon below the disease. This latter operation I performed upon a patient some eighteen months ago, details of which will shortly be reported in your columns. By adopting this operation a fæcal fistula is avoided and the patient placed in as comfortable a position as possible for the remainder of his life. In the discussion at the Clinical Society on Jan. 9th, which followed Mr. Lockwood's paper on a case of Acute Intussusception, I was pleased to see Mr. Barker alluded to a method of treating those cases, when the intussusception could not be reduced, by making a longitudinal incision through the intussuscepiens and then cutting away the inner intussuscepted part, the original incision being closed by sutures. This is a plan of treatment which I have advocated for some time, but, like Mr. Barker, have not had an opportunity of putting it into practice. In carrying out the operation, however, I would suggest that a few Lembert sutures should be inserted, to unite the intestine at its junction with the intussuscepiens, for fear of the accident of its slipping after the removal of the intussuscepted part; this part, if small, might be withdrawn through the incision made in the intussuscepiens, or, if extensive and extending low down in the colon, might by manipulation be passed downwards and withdrawn through the rectum.—I am, Sirs, yours faithfully,

FRED. BOWREMAN JESSETT, F.R.C.S.

Upper Wimpole-street, W.

"THE THROAT AND NOSE AND THEIR DISEASES."

To the Editors of THE LANCET.

SIRS,—In thanking you for the lengthened and, on the whole, very favourable notice of my work, I am sorry to be obliged to point out that there are certain numerous instances of misrepresentation of matters of fact. These are due probably to the circumstance that your reviewer has imperfectly read the book, since an entirely different construction would have been placed on some of my quoted remarks had he even read the word before or the line following some of those that are criticised. To cite only two instances of a minor character—when he asks why I do not treat tuberculosis of the nose at length, he does not recognise that I immediately proceed to say that "it is but rarely if ever primary" (p. 580), and he also ignores the circumstance that I have exhaustively treated the subject of tubercle as affecting the throat, independently of the considerable attention given to lupus both in the throat and nose. Again, in speaking of my modified views with regard to the etiology of diphtheria, he quotes the word "probable" with a parenthetic "*sic*," whereas the words I use are "more probable" (p. 335).

To come, however, to something more serious. Your reviewer says, "The only instruments for treating bony or cartilaginous septal excrescences advocated are Curtis's nasal trephines ..... while no mention is made of the motive power;" and that "Bosworth's saws are not mentioned." As a matter of fact, after referring to Adams's operation of refracturing the septum, I *commence* my remarks on treatment by recommending "removal of the

obstructing part of the septum by means of a *nasal saw, or* by circular trephine driven by a *surgical engine or electro-motor.*" It is true the nasal saw is not mentioned as that of Bosworth, and this is intentional, for the right of that surgeon to priority of invention is really in dispute; but marked attention is drawn by me to the practice and opinions of Bosworth on this particular method of treating nasal spurs, and he is quoted repeatedly as the authority most worthy of respect on this and all nasal questions, his name occurring no less than fourteen times in the chapter devoted to nasal diseases. There are further mentioned, described, and illustrated Dundas Grant's nasal splint for straightening deflections of the septum, especially in young children; Hewetson's dilator for forcible stretching of a stenosed nostril; and Hill's modification of the same instrument (p. 590); all of these being for the purpose of treating that special condition for which your reviewer says I only advocate Curtis's trephine. As a further evidence of the carelessness of this criticism, I must remark that in twenty detailed cases of septal deformity, each of which is illustrated, thirteen were submitted to operative treatment; in most of these the nature of the operation is indicated by dotted lines on the portrait figures, and in *not one* was the trephine alone used; while the trephine and saw combined were employed in eight cases, and the saw alone in three. As a matter of fact, in the ten pages devoted to treatment and relation of cases use of the trephine is alluded to thirteen times, whilst that of the saw is mentioned eighteen times.

Finally, your reviewer is of opinion that "the difficulties in the after treatment of such operations are ignored." In reply I must say that not only am I careful to give every necessary detail, but that I conclude my remarks under this heading as follows: "It is of the utmost importance to forewarn a patient that he must be prepared to give up so much time (fourteen days) for rest at home. While it is difficult to over-estimate the amount of improvement to be gained by removal of septal obstruction in suitable cases, nothing is more likely to bring the operation into disrepute than an under-estimation of the mischief which might occur from want of care during convalescence" (p. 598).

In making this remonstrance I would, with all respect, point out that your reviewer endeavours to prejudice me in the opinion of general practitioners by complaining that I do not give sufficient details of treatment, as instances of which he selects curetting the sphenoid and ethmoid cells for rhinitis caseosa, this rare disease and its treatment both coming absolutely within the province of a specialist. Lastly, his only allusion to my illustrations, which have generally been considered a feature of the book, is a complaint that I do not illustrate a trephine or a saw.

I am, Sirs, yours faithfully,

Weymouth-street, W., Jan. 27th, 1891. LENNOX BROWNE.

*** On referring to the passages in his book to which Mr. Browne draws our attention, we cannot see, in the first place, that his omission to discuss tuberculosis of the nose is justified by his having written on the same disease as observed in the throat. Nor do we perceive that his retractation of his theory that diphtheria was propagated by ptomaines is affected by the criticism. He would apparently have us indicate precisely that he does not quite consider it probable "that germs are the true element of contagion"; but that he holds this "more probable" (*sic*) than that the ptomaine spreads the disease, as he formerly maintained. But, so far as the treatment of septal excrescences is concerned, we willingly admit a slight inaccuracy in the *critique*. For we find that, as Mr. Browne indicates, mention of the saw is made, though we fail to discover either description of the instrument or directions for its use. No reference was made in the review to simple deviations of the septum, and hence the author's apparent complaint that several instruments for this purpose were overlooked is uncalled for. We also concede that Mr. Browne has not altogether omitted the mention of after-treatment in such operations. We can only account for our reviewer's inaccuracy by the fact that the subject is separated from the discussion of the treatment by four pages of cases. We disclaim on the part of our reviewer any desire to prejudice the author in the opinion of general practitioners; yet we cannot but think that when the curetting of such regions as the ethmoidal and sphenoidal cells is recommended some reference should be made to the hazardous nature of the procedure, although such a line of treatment be declared to fall "absolutely within the province of a specialist."—ED. L.

THE MIDWIVES' REGISTRATION BILL.

To the Editors of THE LANCET.

SIRS,—I will refer Dr. Aveling to my letter in a contemporary of last week, and further explain that the figures and facts which I alluded to as erroneous were those which he brought forward at the British Gynæcological Society, and were those he was unable to substantiate in his reply at the close of the debate. If he had been able to do so he would not have voted for the resolution, "That this association, while recognising the necessity for such legislation as shall prevent incompetent women acting as midwives, does not approve of the proposed Midwives' Bill." Since my letter was written he has published other figures. It appears that the present Bill is intended to serve two purposes—(1) To advantage the training schools of midwives and to make midwives competitors for practice with the registered medical practitioner. (2) To curtail the practice of untrained midwives. As it stands it would accomplish the former, but not the latter, which it is the object of everyone to effect. It seems a pity that the medical promoters of the Bill should have allied themselves with the Midwives' Institute, for it is evidently their influence which has ruined the Bill. Now I cannot believe that the eminent authorities mentioned by Mr. Nichol have been so disloyal to their profession as to countenance anything which would favour the former, though they may have approved of some scheme to effect the latter object. I should like to ask Mr. Nichol at what time and in what manner has the profession advised his Institute to take up the matter? I am very much obliged to Mr. Nichol for his piece of ancient history, tolerably well known as it is, but I would point out to him that he should have said the Council of the Obstetrical Society. The matter has never been discussed at a meeting of the Society. We are now practically asked to sanction a complete revolution in the practice of midwifery because the death-rate—the general death-rate—is slightly in excess of that in the out-door departments of some lying-in charities in London. It seems to be quite as reasonable to demand a complete revolution in the management of such institutions as the General Lying-in Hospital because the death-rate there was twice as high as that of Queen Charlotte's Hospital in 1889. It is a matter of great regret that this subject had not the advantage of free and open discussion before the introduction of a Bill on the subject into Parliament. The result has been that many members of our profession have been misled as to the scope of the present Bill, and that many outsiders have been led to believe that the death-rate in childbed is excessive, though it will compare favourably with that in any other county.

I remain, Sirs, yours faithfully,

Hatfield, Jan. 20th, 1891. LOVELL DRAGE.

INSURANCES ON THE LIVES OF PHYSICIANS.

To the Editors of THE LANCET.

SIRS,—In reply to your editorial comments on my letter in last week's issue, I have to explain that in ascertaining the expected deaths I did not take the average of the death-rates in the table you refer to, but employed the ratio of the sums of the numbers dying to the numbers living in each group of ages, which allows for the age distribution. This assumes that the physicians are a stationary class; but the error involved in this assumption must be extremely small, as the numbers living at all ages at the census of 1861 was 14,415, while in 1871 it was 14,684. I would remind you too that before publishing the results I obtained I tested them by taking out the figures for other classes, such as the clergy and the publicans; and I found that the method I adopted yielded results which agreed substantially with what had been brought out by other investigators with better materials and more exact methods. There is no reason to believe that the age distribution in the case of physicians differs materially from that in other

classes; but the numbers living will not agree with those in the table by which I tested them, because the law of mortality is different. I gather, however, from your remarks that you would be satisfied if small groups of ages were used where the death-rates do not differ to any great extent. It is a pity that such wide groups of ages were taken when compiling the censuses of 1871 and 1881, especially the latter; but in the census of 1861 the numbers living are given for groups of five ages; and although the deaths are only given there for groups of ten ages, that will not matter. As you say the subject is one in which your readers take a lively interest, I give in the following table the numbers living after age twenty-five, one-half of the deaths which occurred in the two years 1860–1, and the deaths which might be expected to have occurred according to the Institute of Actuaries Healthy Males Table calculated in the manner above described.

Ages.	Number living.	Expected deaths.	Actual deaths.
25 to 30	1558	11	
30 to 35	1593	13	... 37
35 to 40	1566	15	
40 to 45	1932	21	... 48
45 to 50	1883	26	
50 to 55	1597	28	... 73
55 to 60	1186	29	
60 to 65	937	32	... 59
65 to 70	669	33	
70 to 75	376	28	... 65
75 to 80	217	25	
80 to 85	92	15	... 52
85 to 90	32	7	
90 to 95	9	3	... 10
95 to 100	1	1	
	13,648	287	... 344

Here the results are not quite so regular as in my last table, as we are dealing with very small groups of ages and with the figures for one census only; but it will be seen that, with two small exceptions, the actual deaths are throughout the table considerably in excess of the expected, and, taking all ages together, the extra premium which physicians should be charged comes out 8*s.* 5*d.* per cent. per annum. I think, therefore, that I have proved beyond all doubt that the mortality among physicians is much higher than that among assured lives generally. It is even higher than that of the ordinary population; and I say, all honour to the profession which alleviates the sufferings of humanity *at the risk of their lives.*

I am, Sirs, yours faithfully,

Edinburgh, Jan. 26th, 1891. JAMES CHATHAM.

*** Our correspondent has in the above letter very frankly admitted in effect the force of our criticisms, and it will be observed that he has now reduced his extra premium from 10*s.* 2*d.* to 8*s.* 5*d.* On further consideration, we think he will see that he still exaggerates what may be called the professional mortality of physicians, and we say so on two grounds. First, he has compared a miscellaneous body of men with a select body—i.e., with persons carrying life assurance policies who have been selected from the general population by medical examination. Secondly, the age distribution which his estimates assume does not obtain in the groups of which he has estimated the expected mortality. The first group in his table given above will make this clear. Seeing that the second group outnumbers the first, it is reasonable to assume that the older men are more numerous than the younger men within the first group—that is to say, it contains more men of twenty-nine than of twenty-five years of age. But the corresponding group in the H^{m} Table contains more men of twenty-five years of age than of twenty-nine. It is plain that this is most material to consider when an estimate of expected mortality is to be formed, for a group containing a preponderance of men aged twenty-nine must have a higher mortality rate than a group containing a preponderance of men of twenty-five years of age. Mr. Chatham's method of estimating assumes that twenty-five years of age predominate. Therefore, his estimate is not a correct one according to his data, and it is incorrect to the disadvantage of the physicians. On the other hand, the two groups from fifty-five to seventy-five show an age distribution too favourable to the physicians, and it is to be observed that over this important period the expected deaths are practically equal to the actual deaths. We do not seek to make this point against our correspondent, because we think that he is entitled here to the benefit of the argument which we have urged against him on the former part of his table; but we think that if he will apply his industry to the correction of the two defects which we have indicated in his present materials, he will probably be able to show that there is a distinct professional mortality among physicians, but not at all commensurate to the figure which he has put upon it.—ED. L.

"THE HEALTH OF SOUTHEND."

To the Editors of THE LANCET.

SIRS,—Will you allow me, without touching on controversial matters, to state, with reference to the article under this heading in your last week's issue, that the local board did and do cordially agree with all the recommendations of Dr. Thresh, and are already proceeding to carry them into effect to the full. The necessary steps for the provision of a permanent hospital, and of the new sewer and outfall you refer to, were already in hand some time before Dr. Thresh was called in. The other recommendations have since been taken up, and the board hope that all will be completely carried out before next summer. Trusting to your fairness to give this letter equal prominence to the article I have alluded to, I remain, Sirs, your obedient servant,

Southend, Jan. 27th, 1891. WILLIAM GREGSON, Clerk.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The Death of Mr. T. S. Raffles, Stipendiary Magistrate.

MUCH regret was felt by all members of the medical profession when they heard of the death of Mr. Thomas Stamford Raffles, for nearly thirty-one years the stipendiary magistrate of Liverpool. During that period many thousand cases where medical evidence has been required have been before him, and his attitude towards medical witnesses has always been extremely affable and courteous. He was always most considerate in releasing them from attendance as soon as possible, and was instrumental in securing them payment in non-committal cases.

The Annual Meetings of the Hospitals.

During January and February the annual meetings of most of the medical and other charities are held. With the exception of the Royal Infirmary these annual meetings take place in the town hall, unnder the presidency of the mayor for the time being. Those of the Northern Hospital and Infirmary for Children have already been held. The story is the same, slightly varied. The Liverpool public are proverbially liberal and generous to medical charities, even to the extent of munificence. But this is true of only a part of the public. The population of Liverpool is now 600,000, and it has been calculated that the annual subscribers to all the medical charities would be amply included in round numbers varying from 5000 to 10,000, leaving a very large number who subscribe nothing, though well able to do so. This arises partly from indifference, partly from a belief that anything short of the conventional "guinea" would not be acceptable. The present mayor, Mr. J. B Morgan, has a scheme for organising a better support to the charities in future, which it is hoped will be successful.

The Society for the Prevention of Cruelty to Children in Liverpool.

Liverpool has the proud distinction of having been the first city to establish a society for the Prevention of Cruelty to Children. But there is a cruel irony in the fact that it was not established, even here, till long after the establishment of the Society for the Prevention of Cruelty to

Animals. Even now cruelty to children is regarded by too many persons with much more indifference than cruelty to a horse or dog would be. The local society is doing its best to prevent one form of cruelty—the employment of young children on the streets late at night by their unnatural parents for begging purposes.

Liverpool, Jan. 28th.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

Scarlet Fever.

IT is satisfactory to know that the recent severe weather has produced a marked effect upon this epidemic. The number of cases admitted during the past week into the Fever Hospital was twenty-six only, while there were sixty discharges. The total number of inmates was 311, which appeared to be a large number, but when the epidemic was at its height this was exceeded, on two occasions being over 500.

The New General Hospital.

Considerable enthusiasm was manifested at the town's meeting held on the 29th inst. towards the furtherance of the interests of this hospital. The amount already promised exceeds the most sanguine expectations of the promoters. To ask for £70,000 from the public and to get it before the first meeting is held marks an era in the history of local charities. To the energetic action of the chairman, Mr. J. C. Holder, the result is mainly due, while his efforts have been assiduously seconded by the committee. It is to be hoped that little time will now be lost in commencing operations on the new site. Necessarily a work of this magnitude must be protracted over some years. A beginning made with such zeal, however, augurs well for the future, and commands confidence in the undertaking.

Children's Hospital.

The annual meeting of the governors of this hospital was held on the 26th inst., under the presidency of Mr. C. A. Smith Ryland. Some interesting and elaborate statistics were given as to the cost and administration in various directions. Among others it was shown that the average detention rate during the last ten years was twenty-eight days; the average death-rate 9·5 per cent. The number of patients treated during the last year was 14,799, or 414 more than in the previous year. The income for the year was £4413 and the expenditure £4510. The usual votes of thanks were passed.

Hospital Sunday.

The annual meeting in connexion with the periodical collections was held on the 22nd inst., when the various officers were elected, the Mayor being appointed chairman.

Birmingham, Jan. 27th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

University of Durham.

I HEAR that at a Convocation held to-day the University of Durham resolved to institute two new degrees in Sanitary Science—viz., a Bachelorship and Doctorate in Hygiene. I have not yet heard upon what terms these degrees are to be granted, but no doubt full particulars will soon be issued. In the alterations of existing rules no degree of Doctor in Hygiene shall be granted unless the petitioner is a Bachelor in Hygiene, and has, subsequently to the date of his acquiring the degree of Bachelor in Hygiene, been engaged for two years in practice as medical officer of health, and shall have passed such examination as the warden and Senate shall require.

The Newcastle Throat and Ear Hospital.

The Newcastle charities are commencing their annual meetings, and the Throat and Ear Hospital is one of the first to report upon last year's work at the meeting held on the 23rd inst., the Mayor presiding. It was stated that the new cases entered were 1948; treated at the Surgical Home, 153; old cases under treatment, 415: making together 2516 cases treated. The patients had contributed £316. There had been an increase in the subscriptions and donations, but as the year's work had involved increased expenditure there was a small balance due to the treasurer.

Sir J. Crichton Browne on "Brain Rust."

Sir J. Crichton Browne lectured in Newcastle last night on "Brain Rust." Dr. Frederick Page, surgeon to the Royal Infirmary, presided. There was an immense audience, at least 2000 people, who listened with rapt attention to the eloquent and learned lecturer. He mentioned his own well-directed efforts against brain pressure and its resulting evils to the brain and general health, when the body was in an immature and youthful condition; but warned his audience, on the other hand, of the evil effects of torpor or misuse of the brain comprised in the term "brain rust," and instanced his own experiments on the brains of ducks in illustration. He showed that, while the wild and tame duck were incontestably the same, the brain of the wild duck was absolutely heavier than that of the domestic duck, and in proportion to its body nearly twice as heavy. He thought that no one would hesitate to attribute the diminished size and arrested development of the domestic duck's brain to the influence of domestication; few calls had been made on its intelligence; it had not its energies invoked by a free existence, and it had been dragged through eighteen centuries to a lower level. Of this effect in man he gave many instances, including the ill effects on the minds of boys through lack of stimulus; and also the baneful effects of solitary confinement on prisoners, believing that to shut an habitual malefactor within his own meagre, narrow, and depraved thoughts could only aggravate his viciousness and weaken his self-control. In the maximum period of three days' solitary confinement, and on bread-and-water diet, prisoners lost on an average from 2lb. to 3lb. in weight. He knew no surer method of producing premature senile decay than for a man of active habits to retire and do nothing when just past the zenith of life; and, on the other hand, he did not know a surer way of enjoying green old age than to keep on working to its close.

I learn that the Lord Chancellor has accepted the nomination of Mr. C. Clark Burman of Alnwick as deputy coroner for North Northumberland.

Newcastle-on-Tyne, Jan. 27th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

EDINBURGH.

Royal Hospital for Sick Children.

THE thirty-second annual meeting of the contributors to this hospital was held on Monday. The report stated that during the year the number of patients treated was 7811, of whom 610 had been treated in the wards, 6551 in the dispensary department, 487 as outside surgical cases, and 163 children had been vaccinated. The income (exclusive of legacies) was £3921, which was a decrease of £284 compared with the preceding year. Reference was made to the outbreak of typhoid fever in the hospital and the removal of the patients and staff to Morningside. The change to the fresher and purer air of the suburbs had been much appreciated by the nurses and patients. Clinical lectures, which had been interrupted, have been resumed, and the directors have sanctioned female students obtaining instruction in the hospital on the condition that it be at a different hour from that for the male students.

The City Hospital.

At the meeting of the Edinburgh Town Council last week, Bailie Russell, M.B., referring to the typhoid epidemic, said it was decreasing, but that it had shown that the city hospital was not large enough for the needs of the city, for at present there was hardly room for another patient in it.

Medico-Chirurgical Society.

At the meeting of this Society last week several pathological specimens were exhibited, after which Dr. Halliday Croom made a communication on some Recent Work in Abdominal Surgery, in which he reviewed the results of treatment in a large number of his own cases. This was followed by a paper from Dr. Harvey Littlejohn on an Outbreak of Typhoid Fever, in which the source of infection was traced to a dairy farm. Both papers gave rise to considerable discussion.

Scottish Microscopical Society.

The fourth meeting of this Society was held in Edinburgh on the 16th inst., Professor Rutherford, F.R.S., in the chair. The President referred to the loss the Society had sustained by the decease of one of its vice-presidents, Mr. Adolf Paul Schulze, a native of Saxony, who settled as a merchant in Glasgow, and devoted his leisure time to microscopical optics, more especially to photomicrography, in which he acquired very remarkable skill, his article on the subject in the *British Journal of Photography* for May 24th, 31st, and June 7th, 1889, being one of the best expositions of the practice of that difficult subject that has yet appeared. Mr. G. W. Watson, L.D.S., made a communication on pathology of dental caries, which was illustrated by sections and photographs of carious teeth prepared by himself, and which were shown on the screen with the oxyhydrogen microscope; the destruction of dentine by the growth of micrococci and bacilli in the tubules was clearly demonstrated. Mr. James Hunter, F.R.C.S. Edin., gave an interesting lantern demonstration of the properties of simple lenses, some of which had been devised by himself. Professor Macfadyean, B.Sc., gave an account and a demonstration of the morphology of actinomyces.

Health of Edinburgh.

The mortality last week was 90, and the death-rate 19 per 1000. Diseases of the chest accounted for 35 deaths, and zymotic diseases for 15, of which 2 were from typhoid fever, 1 from diphtheria, 3 from scarlatina, and 9 from whooping-cough. The intimations for the week were from typhoid fever 15, diphtheria 6, scarlatina 31, and measles 10.

Edinburgh, Jan. 27th.

ABERDEEN.

Aberdeen University Court.

At a meeting of the Aberdeen University Court held on Friday, 23rd inst., the Marquis of Huntly, Lord Rector, presiding, Dr. Angus Fraser raised the question as to whether the court had not the power to appoint all examiners and lecturers. All were agreed that it was the duty of the Court to appoint examiners, but there was considerable doubt with regard to the appointment of lecturers. The question came before the Senatus in the case of the appointment of the next Gifford lecturer, and a communication from that body was read at the meeting, requesting the University Court to join them in obtaining the opinion of counsel as to the right under the Act of 1889 of electing the Gifford lecturer. In discussing the question Dr. Fraser suggested that it might be well to have the opinion of counsel upon the point; but it was ultimately agreed, on the motion of Mr. Edmond, "That the Court communicate with the Courts of the other Universities with the view of arriving at a common understanding as to the respective rights of the Courts and Senatus of the Universities to appoint examiners and lecturers, and especially the Gifford lecturer."

Students' Representative Council.

A statutory meeting of the Students' Representative Council was held at Marischal College on the 24th inst. A considerable amount of routine business was transacted, and it was also agreed that the council should offer to the University Court to conduct all the arrangements for the rectorial address on March 6th, as was done by the Council in 1888, provided the University Court paid the necessary expenses which were on that occasion paid by the Senatus.

Koch's Treatment of Tuberculosis.

Professor Smith Shand and Dr. Blackie Smith, physicians to the Royal Infirmary, have procured a supply of Koch's liquid, and in their wards several cases of lupus and phthisis are being treated. So far the results have been characteristic and, on the whole, satisfactory.

Health of the City.

During the week ending Saturday, 24th inst., the following cases of zymotic diseases were notified to Professor Matthew Hay, the medical officer of health: Measles, 1; scarlet fever, 16; diphtheria, 2; whooping-cough, 2. In his report for the month of December Dr. Hay states that the death-rate was 20·48, as against the average of 22·52 for the same month during the past ten years; it is also lower than in any individual year except 1888. About this time last year he directed attention to the exceptional prevalence at that period of puerperal fever. In his present report he says he regrets to have again to note a recrudescence of this disease. During the month there were five deaths from puerperal fever—an unusually large number, seeing that the total number for a whole year is usually not beyond six or seven.

Aberdeen Jan. 28th.

IRELAND.

(FROM OUR OWN CORRESPONDENT.)

British Medical Association: Dublin Branch.

THE fourteenth annual meeting was held last week at the Royal College of Physicians. The annual report of the Council, which referred to the admittance of Irish graduates to English hospital appointments and the condition of army medical officers, was adopted. The new President, Dr. Walter Smith, delivered an address which dealt with the administration of hospital extern departments and their special importance as a means of developing in the best manner the education of students. The following resolution, proposed by Dr. Atthill and seconded by Mr. Horne, was adopted:—"That in the opinion of this Branch the registration of midwives as proposed by Parliament will not tend in any marked degree to render more efficient the nurses practising as midwives, unless steps be first taken to improve their education; that the question of registration be postponed till it is shown that facilities exist for the education of such women as may desire to practise as midwives, and that the proposed registration of all women at present practising as midwives would be a most dangerous proceeding. This Branch is further of opinion that any legislation on the subject of improving the education or status of midwives should not be undertaken without serious consideration, and desires to urge on the Government the necessity of having it referred, in the first instance, to a select committee for consideration and report." The annual dinner took place the same evening in the hall of the College of Physicians.

The Rights of an Unborn Infant.

In the Queen's Bench Division judgment was given last week in the case of Mrs. Walker *v.* the Great Northern Railway Company, which involved an important point—viz., the rights of an unborn child. The plaintiff was a passenger in the excursion train that was wrecked last year at Armagh, and was *enceinte*, the child being born deformed. She alleged that the child which she was carrying at the time of the accident was injured, and as a result was born deformed. The railway company, by counsel, demurred, alleging that an unborn child had no right of action or interest to recover damages for personal injuries. The plaintiff's case was lost, the demurrer being allowed. It may be mentioned that a sum of £800 had already been given to the mother by the company as compensation for injuries received by her.

City of Dublin Hospital.

The patient whose lingual arteries Mr. Croly tied as a preliminary step to excision of the tongue, referred to last week in these columns, died suddenly while incautiously sitting up in bed to eat.

Magrath, the Irish Giant.

Professor D. J. Cunningham this week read a paper at the Royal Irish Academy on the skeleton of the Irish giant Cornelius Magrath, at present in the museum of Trinity College. He believes it was a case of acromegaly, there being undue development of various portions of the skeleton—viz., abnormal size of the hands, feet, and lower jaw, which projected greatly below the upper jaw, while the head itself was not in equipoise with the vertebral column, and in this respect resembled the negro head. Magrath's height was said to be 7 ft. 8 in., but Professor Cunningham, from a careful examination of the skeleton, believes it was 7 ft. 2¼ in.

Mr. Michael Joseph Bulger has been elected assistant surgeon to the House of Industry Hospitals.

Jan. 27th.

PARIS.

(FROM OUR OWN CORRESPONDENTS.)

Treatment of Strictures of the Ileo-cæcal Valve.

AT a recent meeting of the Academy of Medicine M. Péan made a communication on the Operative Treatment of Strictures of the Ileo-cæcal Valve. Stricture of this valve was rare; the speaker had met with but eight cases. They might be divided into two main divisions—those of an inflammatory origin and those of a neoplastic origin. M. Péan had devised an operative procedure which consisted in creating, without the removal of any part of the bowel, a dilatation at the exact seat of stricture. Having incised the abdominal wall above Poupart's ligament, the neighbourhood of the valve is quickly reached. The adjacent portions of large and small intestine—that is, on each side of the valve—are then ligatured. Next, an incision is made into the ileum and cæcum respectively above and below the valve. The valve being thus brought into view is itself resected in such a manner and to such an extent as to render the strictured portion again normally patent. This done, the extremities of the intestinal wound are brought together so that the ileum and cæcal incisions may be in close juxtaposition and next sutured. The abdominal wound is treated in the ordinary manner. M. Péan had recently operated in this way in two cases, which gave excellent results. The advantages he claims for the method are: that it serves equally well for inflammatory strictures of the small intestine as for those of the cæcum and ileo-cæcal valve; that it presents none of the inconveniences arising from an artificial anus; that it is comparatively easy of execution; that it requires fewer sutures than a resection, which lessens the length of time required for the operation and diminishes the chance of perforation, fæcal fistula, and septic peritonitis; that it runs no risk of leaving a circular stricture, as follows sometimes after resection; and that, finally, it establishes in the place of the stricture a passage sufficiently large for fæcal matters to pass freely.

Action of Retinol on other Substances.

M. Vigier communicated at a recent meeting of the Therapeutical Society some observations on the power of retinol to dissolve various substances ordinarily insoluble. He dwelt especially on its property of dissolving phospharen, a substance for which it was difficult to find an excipient. Retinol he found to act admirably in this way, and being unoxydisable the solution remained unaltered. Thus a small piece of burning phosphorus thrown into a solution of retinol was at once extinguished. He pointed out that the preparation of phosphorus thus prepared could be administered with advantage perhaps in rickets, scrofula, anæmia, chlorosis, locomotor ataxia, &c. Amongst other substances which retinol will also readily dissolve are salol, iodol, naphthol, aristol, cocaine, &c.

A New International Clinique.

Seeing that the giving of medical assistance to the various foreigners of all nations who inhabit this city was no special part of the State system of medical relief, a number of medical men have formed themselves into a society called the Society of Medical Assistance to Foreigners, for the purpose of (1) organising a system of hospital relief to all foreigners, (2) to give them gratuitous consultation, and (3) to take advantage of the clinical material which will be thus collected to give practical instruction in all the branches of medical art. This establishment, it is hoped, will meet a great want in this cosmopolitan city, and will, it is trusted, form the basis of an international Parisian hospital. The Society is already assured of the hearty concurrence and assistance of a number of French and foreign notabilities.

The Siege of Mayence.

The *Archives of Military Medicine* recently gave an interesting account of the medical history of this siege in 1793. The medical officer in charge of the hospital says: "On the 11th of April there was a dreadful cannonade. Amongst the number brought us with enormous wounds—and the number was not inconsiderable (in less than an hour, eight for various amputations)—was a little volunteer with great courage, although suffering terribly. I ordered that he should be undressed while I went round the ward to glance at the various operations which the assistant surgeons were performing. Returning to him with Citizen Rivière, who was to perform the operation, we perceived an enormous lower limb, enormous from the unusual amount of swelling. Manipulating the limb, we came across a hard swelling, which we took to be caused by a grapeshot ball lodged in the limb. Our astonishment was great when we found that an incision of five or six fingers' breadth was insufficient to extract this enormous foreign body, which, on being finally got out, turned out to be a Prussian ball weighing no less than 13lb.! How could a mass of this size have just the amount of force necessary to lodge in a thigh and not pass through it! This problem I leave to natural philosophers, but I admit it to be almost necessary to have seen such things to believe them. Of course there was nothing for it but to operate on this poor fellow or leave him to certain death; we therefore amputated high up. When we had finished he asked if it was done, and on being told that it was, he cried out loudly, 'Long live the nation!' Anæsthetics had not then seen the light, it must be remembered. On another occasion the firing of a mine caused a tremendous explosion, which shook the hospital building terribly. At that moment I was engaged amputating the limb of a soldier. As I was sawing the bone amidst the general confusion caused by the first shock, a second occurred which brought down the whole of a glass skylight over the patient and myself. Not knowing whence all the glass came, I asked those standing round what was the matter. The patient overheard me, and said, 'Go on, don't alarm yourself, you will see plenty of this kind of thing.' When I had finished the operation he cried, 'Vive la République!'"

Paris, Jan. 27th.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Koch's Remedy at the Medical Societies.

DURING the past week the medical societies have been more than ever occupied with Koch's treatment; demonstrations, papers, and discussions upon it have taken place at the Society for Internal Medicine, at the Medical Society, the Society of the Charité Physicians, and the Hufeland Society. At the first-named society, Dr. Guttmann exhibited the intestine from a case at the Moabit Hospital, where twenty-five injections had been given before death occurred. The intestine showed marked healing of the tuberculous ulcers; they were free from caseous masses, the bases and margins being quite clean. In this situation the tissue destroyed by Koch's remedy could be wholly removed. The proceedings in the Medical Society are fully reported in the *Berliner Klinische Wochenschrift*.[1] The discussion occupied the whole evening, and was most attentively listened to, the chief speakers being Drs. Ewald and James Israel; whilst Professor Virchow showed specimens of miliary tuberculosis from a case of pleurisy treated by this method. At the Society of the Charité Physicians Drs. Senator and Sonnenberg were the speakers. They both showed some interesting cases. Senator's case was that of a young lady with very marked infiltration of one apex, in whom, in spite of the effect of high doses (commencing at 0·003 grm.), rapidly increased (in twelve days up to 0·1 grm.), not the slightest rise in temperature occurred, although the lung affection retrogressed. During the treatment some laryngeal disease arose, but this gradually disappeared. The pulmonary signs, at first so favourable, had latterly shown some tendency to get worse. Sonnenberg reported on five patients in whom he had opened cavities before commencing the treatment by injection. Three of the patients were apparently cured, and he exhibited them before the Society. In one of them there could be seen below the right clavicle a small pulmonary cavity which appeared to be in course of contraction. Sonnenberg's fourth patient showed no improvement; the fifth was operated on only a short time since. Sonnenberg had the opportunity of comparing a patient whose pulmonary cavities had been opened, and who was not inoculated, with those who were inoculated, and could affirm that in this the changes in the cavities do not take place. He spoke of the great difficulties in formulating indications for such operations, but thinks that eventually this will occupy a wide field in the treatment of tuberculosis. One view depends on whether, with the destruction and

[1] This is fully abstracted in another column.

shrinking of a cavity, tuberculosis is made to disappear from the organism. In the Hufeland Society Dr. Heymann brought forward a patient in whom the ulceration of the larynx had extended very much, but at the same time stated that he had in the rest no more striking features, but also no cures. Dr. Hansemann, Virchow's assistant, then spoke, clearly and lucidly, upon his pathological and histological experiences in the treatment by Koch's liquid, and explained his remarks by a demonstration of macroscopical and microscopical preparations. Hansemann agreed in the main with Virchow's well-known statement, but emphasised still more plainly the important proposition that after the increase of necrosis in the lungs the unaffected tubercle bacilli must be absorbed and thereby propagated, to the great danger to the patient. The speaker summarised the position in the following terms:—The condition which is excited by the injection of Koch's remedy is curable. Still, the method may doubtless destroy life. The remedy does not destroy all the tuberculous tissue, and even if this be destroyed the organism may suffer severe changes from its reabsorption.

Berlin, Jan. 24th.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

Koch's Treatment.

KOCH'S second publication has caused considerable surprise in medical circles, and especially the first passages of his paper in which all the publications made by clinical observers on the action of the remedy were ignored. Recollecting the statement of Minister von Gossler, that the preparation of the remedy could not be described (a unique statement in view of the great advancement of natural science), the physicians were somewhat astonished by the simplicity of the preparation of Koch's liquid, the more so as Koch was found to be following the directions initiated by Pasteur's school, and by the works of the late Dr. Wooldridge, Hankin, and others, without mentioning even the names of his scientific predecessors. It must be assumed that Koch's second publication has not been less premature than his first one, and that it has been provoked by Virchow's reports. The effect of suggestion on the subjective symptoms in patients could not be better illustrated than in the recent era of Koch's treatment. At first it was rare to find a patient subjected to the cure who did not feel better at least in some way after the injections; but after Virchow's publication, which has been widely circulated by the lay press, the majority of patients in the General Hospital commenced to complain of different new subjective troubles which were ascribed by them to the action of the liquid, and there were frequently cases where the patients, formerly highly enthusiastic, declined to be treated further by Koch's method. Certainly the General Hospital, with its constant pressure of space, has not been a suitable place for such an extensive trial as has been made here at the clinics, where about 30 per cent. of the beds were allotted to tuberculous and lupus cases—that is, to cases which would not have applied for admission to hospital wards under ordinary circumstances. It cannot be said that any case has been cured by the treatment, but it must be stated that improvement has taken place in some of the cases of surgical tuberculosis. New eruptions of lupus nodules have made their appearance in Professor Kaposi's improved cases. There is also a difficulty in the improved cases as very large doses (5 centigrammes and more) do not produce any reaction, and one does not know how far the dose of the injection can be raised. It is extremely difficult to say anything about the pulmonary cases. It seems that there are two different types. In one of them the temperature curve rises after every injection corresponding to the reaction, but returns to the previous level; while in the other the temperature curve does not return to its former level, and the patients remain feverish after the reaction has passed. The latter type is the less favourable for the treatment, and to it belong most of the fatal cases. Not less difficult is the explanation of the anatomical facts, as the pathological changes occurring in the course of tuberculous disease have not been fully recognised till now, and there is no other disease which has been more neglected by pathologists on the Continent on account of its frequency. But in slight cases of laryngeal tuberculosis, where the changes could be observed clinically by the laryngoscope day by day, it could be stated that the injections of "Kochin" caused the rapid and extensive appearance of new ulcerations, sometimes of highly destructive tendency, and at the last meeting of the Medicinisches Doctorencollegium a case was shown where the ulcerative process occurring after the injections was an extensive one, which has never been observed by any of the Viennese professors. These observations seem to corroborate Virchow's statement that a dissemination of the tuberculous virus takes place in the body due to the injections. Referring to the diagnostic value of the fluid, it has been reported already to THE LANCET that it produced local and general reaction in cases of leprosy, actinomycosis, and fever (with small doses, one to two milligrammes) in apparently healthy persons. The explanation of the action of his liquid given by Koch in his recent publication was also not believed to be satisfactory in medical circles here. It seems to me that the specific action of the liquid must correspond to a specific chemical substance contained in the mesoblastic tissues under certain pathological conditions—e.g., tuberculosis, lupus, lepra, actinomycosis,—and Koch's discovery will certainly stimulate the hitherto neglected study of pathological chemistry. At present we know only a single chemical substance peculiar to tuberculosis—viz., cellulose, or at least a substance exhibiting all the reactions peculiar to cellulose, which was discovered some years ago in the blood and in the tissues of tuberculous cases by Dr. Freund of Vienna. This discovery, reported in THE LANCET of 1887, confirmed later by Dr. Kabrhel of Prague, and which is also highly interesting from the naturalist's stand-point, did not receive much attention.

Vienna, Jan. 26th.

CANADA.

(FROM OUR OWN CORRESPONDENT.)

Koch's Liquid.

UP to this date the only hospital where Koch's fluid is being used in Canada is the General Hospital, Montreal, where seven patients are under treatment.

Amalgamation of Medical Teaching Centres.

The vexed question of the amalgamation of the Montreal Branch of Laval University with Victoria Medical School has at last been amicably arranged and settled by the passage of a Bill through the Quebec Legislature. Its quietus was a cablegram from the Pope to Premier Mercier.

Medical Reunions.

The fourth annual banquet of the Toronto University Medical College was held on the evening of Dec. 4th, some 250 guests being present. The Chancellor, replying to the toast of "Toronto University," compared it to a sturdy oak, whose growth, lacking in symmetry, preserved the elements of strength and at the same time peculiarities in its constitution which time alone could remedy; the dean, Dr. W. T. Aikins, advocated the founding of a chair in Sanitary Science.—Trinity Medical School held its annual dinner on Dec. 5th. The attendance was large, many of its graduates, in happy reunion, drinking to the prosperity of their *alma mater*.

Malignant Cutaneous Epitheliomata.

Dr. Robinson of New York read a paper on this subject before the Toronto Medical Society, at the regular meeting on Dec. 17th. Discussing more particularly the treatment, he has found arsenious acid in the form of a paste more successful in many cases than the knife, scraping, or caustics.

Post-graduate Lectures.

The most interesting event in medical circles during the month of December was a series of post-graduate lectures and demonstrations given under the auspices of the University of Toronto The attendance of practitioners from without the city was large, and testified to the appreciation of the efforts of the Medical Faculty in this new departure. The chief features of the programme were lectures by men of prominence from the United States, one of whom, Dr. A. R. Robinson of New York is a graduate of the University. He delivered two lectures on Eczema—Catarrhal Dermatitis. Dr. Abbe, New York, delivered three lectures, the subjects

being (*a*) the Limitations of Spinal Surgery; (*b*) Mastoid Pyæmia, Jugular Thrombosis, Ballance's Operation; (*c*) Technique of Intestinal Anastomosis. Perhaps the most important subject for the general practitioner was that discussed by Dr. Vaughan, of Ann Arbor University, of Typhoid Fever. Certainly great interest centred in the address delivered by Dr. J. W. White (Philadelphia) on the Present Position of Antiseptic Surgery, a reply to Mr. Tait's recently published criticism of Sir Joseph Lister's Berlin address. It was a careful review of the progress and development of the Listerian treatment, the results of its adoption in the practice of leading surgeons, and a discussion at some length of Mr. Tait's arguments and reasonings. The other lectures of the course were given by local practitioners. It is to be regretted that so many lectures should have been crowded into the brief space of three days, partaking of the nature of a medical revival.

The Pathological Society.

This Society held its regular meeting on the evening of Dec. 18th. Dr. Robinson (New York) read a paper on Psorospermosis Follicularis Vegetante. Specimens were exhibited of Paget's Disease of the Breast; Cirrhosis of Liver and Suppurating Mesenteric Glands, in a case simulating Typhoid Fever; a Dermoid Cyst of the Orbit and Recurrent Sarcoma of the Orbit.

Toronto, Jan. 1st.

THE SERVICES.

NAVAL MEDICAL SERVICE. — The following appointments have been made at the Admiralty:—Surgeons: Geo. T. Broatch to the *Duke of Wellington* (dated Jan. 22nd, 1891); Robert Hardie to the *Defiance* (dated Jan. 24th, 1891); John Grant to the *Firebrand* (dated Jan. 27th, 1891); and Alfred E. Weightman to the *Duke of Wellington*, additional (dated Jan. 12th, 1891).

YEOMANRY CAVALRY.—Lanarkshire (Queen's Own Royal Glasgow, and Lower Ward of Lanarkshire): Surgeon and Honorary Surgeon-Major R. D. Reid, M.D., resigns his commission; also is permitted to retain his rank, and to continue to wear the uniform of the Regiment on his retirement (dated Jan. 24th, 1891).

VOLUNTEER CORPS. — *Artillery:* 1st West Riding of Yorkshire (Western Division, Royal Artillery): Acting Surgeon W. Gay, M.D., resigns his appointment (dated Jan. 28th, 1891).—1st Gloucestershire: Surgeon and Surgeon-Major (ranking as Major) T. S. Ellis resigns his commission; also is permitted to retain his rank, and to continue to wear the uniform of the Corps on his retirement (dated Jan. 28th, 1891); Acting Surgeon T. M. Wilkinson resigns his appointment (dated Jan. 28th, 1891).—2nd Hampshire (Southern Division, Royal Artillery):—Acting Surgeon J. Hill resigns his appointment (dated Jan. 24th, 1891).—*Royal Engineers:* 1st Durham: Acting Surgeon W. Munro Jennings is appointed Second Lieutenant (dated Jan. 6th, 1891).—The Tyne Division: The services of Surgeon R. K. Tait are dispensed with (dated Jan. 24th, 1891) —1st Lanarkshire: Robert Cowan Lees, M.B., to be Acting Surgeon (dated Jan. 24th, 1891); Acting Surgeon M. F. Anderson, M.B., resigns his appointment (dated Jan. 24th, 1891).—1st Volunteer Battalion, the Essex Regiment: Surgeon A. Wright is granted the rank of Surgeon Major, ranking as Major (dated Jan. 24th, 1891).

Obituary.

W. ORLANDO MARKHAM, M.D., F.R.C.P.

THE announcement of the death of Dr. Markham, which took place at Clapham Common on the 23rd inst., will awaken but few memories in the minds of the younger members of the profession. For a good many years past his name even will have been unfamiliar, save to those whose professional work lay for the most part amongst the sixties and seventies of the present century. He was, however, a man of striking ability and originality, and his book on Diseases of the Heart marked a distinct advance in knowledge, and may, with his papers in the Medico-Chirurgical Transactions on points in Cardiac Physiology and Pathology, be still read with profit. Being possessed of ample means, and his health breaking down, he retired early from active professional life, but he long continued to take a keen interest in medical matters. Dr. Markham was born in 1818, and was the son of Charles Markham, formerly clerk of the peace for Northampton. His professional studies were carried on in Edinburgh, Paris, and Heidelberg, and in 1840 he obtained the M.D. Edin. In 1854 he was elected a Fellow of the London College of Physicians, and delivered the Goulstonian lectures in 1864. Two years thereafter he was selected by Mr. Gathorne Hardy as medical inspector under the Poor-law Board, of which he was also medical adviser. Dr. Markham was for some years physician to St. Mary's Hospital, Paddington, and lecturer at the school, and was from 1860 to 1866 editor of the *British Medical Journal*.

SENATOR G. B. BORELLI.

ON Saturday, the 10th inst., after a long and severe illness, died at Cuneo in Piedmont the Commendatore Dr. Giovambattista Borelli, Senator of the Kingdom of Italy. Born at Boves in the province of Cuneo in August, 1813, young Borelli followed up his classical studies at the University of Turin by enrolling his name in the medical school, and after a brilliant academic course graduated in medicine and surgery. He was shortly thereafter nominated *primaris* in the Hospital of SS. Maurice and Lazarus. There he laid the foundation of that clinical accomplishment which was ere long to place him in the front rank of Italian consultants, and which seemed enlarged and refined rather than diluted and weakened by his studies in those physical and natural sciences of which he was passionately fond. His masculine power of work and his philosophical love of sound generalisation made him singularly popular with the successive relays of students who for nearly forty years repaired from all parts of Italy to his surgical clinique. His fame spread beyond the Italian frontier, and numerous learned bodies, foreign as well as domestic, elected him Honorary or Corresponding Fellow. In America particularly he had many admirers, who classed his work, expository and operative, on the lesions of the genito-urinary organs with that of Marion Sims. His publications were frequent and in great request with the profession in Italy, those on the Hernias, on the Angular Ankyloses of the Knee, on Nasal Polypus, and on Tumours of the Mouth, still retaining authority even with the generation that succeeded his own. He competed for the gold medal offered by the Medical Society of Toulouse on Iodine Injections, and gained the prize from many able competitors. Another distinction he won from France was that of the Cross of the Legion of Honour, for surgical services rendered to the French wounded in the campaign of 1859, at the battles of Palestro and Magenta. "John Baptist Borelli," writes an Italian correspondent, "was a man of iron will, with an intelligence luminous and serene, and with a soul ever ardent and young. As a citizen he was devoted to his native land, and his fellow townsmen, recognising in him the qualities of the publicist and the legislator, elected him as their representative in the Parliament of Italy. For some time, however, he withdrew from the political arena, but in 1876 he re-entered Parliament, this time for the constituency of Fossano, which he represented with liberal enlightenment and statesmanlike ability till 1881, when he was created a Senator of the Kingdom. In him the country loses a man of great worth, a *savant* of high reputation, a politician of weight, one of the most revered of its senators, and one of the most independent and upright of its sons."

ROYAL COLLEGE OF PHYSICIANS.

THE ordinary Comitia of the College of Physicians was held on the 29th inst., the President, Sir A. Clark, Bart., in the chair.

In opening the proceedings the President made a graceful allusion to the honour conferred by Her Majesty upon one of their most distinguished Fellows, Sir Richard Quain, Bart.

The following gentlemen were admitted Members of the College:—H. J. Campbell, M.D. Lond.; E. C. Carter, M.B. Edin.; E. L. Fox, M.D. Camb.; H. G. Turney, M.B. Oxon.

Communications were read from the University of London and the secretary of the Royal College of Surgeons,

and from the Medical Society of London. The last-named referred to the alteration in the terms of the disposal of the Fothergillian Fund, and the Society asked the College to permit its President to act on the board for awarding the prize. On the motion of Dr. C. T. Williams, seconded by the Senior Censor, it was resolved to accede to the request of the Society provided that the President be empowered to invoke the assistance of one of the Censors if necessary.

The opinion of the College solicitors on the Bradshaw bequest having been given, it was resolved to apply to the Charity Commissioners to permit the College to change the date of the delivery of the lecture.

A communication from Dr. Rentoul was ordered to lie on the table; and on the motion of Dr. Farquharson, seconded by Dr. Priestley, it was resolved to appoint a committee to watch the progress of the Midwives' Registration Bill. The President nominated Drs. Farquharson, Priestley, Douglas Powell, and Sturges.

The following Fellows were elected to serve on the Council: Drs. W. H. Ransom, Thos. Stevenson, C. T. Williams, and Whipham.

Dr. C. T. Williams moved the following resolution: "That it be referred to the Council to consider how far the services of non-resident Fellows connected with provincial medical schools can with advantage be made available for the College examinations." This was seconded by Dr. Leach, warmly commended by the President, and carried unanimously.

A report on certain mineral waters forwarded from Persia by Dr. Carson was read. It was signed by Drs. H. Weber and Burney Yeo, and was to the effect that all the specimens were mainly feeble sulphurous waters of no special value.

The usual quarterly report of the Finance Committee was read; also that of the Examiners for the Licence. On the recommendation of the Committee of Management the University of Adelaide was recognised as fulfilling the conditions of the Board for the complete curriculum of professional study. Its graduates will therefore be admitted to the Second and Final Examinations on the same conditions as those of other recognised universities.

Medical News.

UNIVERSITY OF CAMBRIDGE.—At a congregation held on the 23rd inst. the following degrees were conferred:

Bachelors of Surgery and Medicine.—Frederick Eustace Batten, Sydney Nevill Harrison, and Frederick Charles Martley, Trinity; Chas. Robert Arnold Sutton, Clare; James Jenkinson Knox, Cavendish Hostel; Edwin Webster Hardwick, non-collegiate.

UNIVERSITY OF GLASGOW.—The following is a list of gentlemen who have received the degrees of M.B. and C.M. since the general graduation in July, 1890:—

Thomas Primrose Anderson, Partick, Glasgow; Alexander Andrew, Tarbolton, Ayrshire; Alexander Percy Agnew, Burnley, Lancashire; Thomas Berry, Langside, Glasgow; James Cordiner, M.A., Lesmahagow, Lanarkshire; George Henry Edington, Hillhead, Glasgow; Malcolm Gillies, Easdale, by Oban; James Kirkwood, Greenock; Hugh Lang, Woodside, Cardross, Dumbartonshire; George Lowson, Dundee; Arthur Henry Lucas, Carmyle, near Glasgow; Thomas Dryden Moffat, Glasgow; Robert James Nevin, West Auckland, county Durham; Douglas Wills Russell, Paisley; William John More Slowan, Hilton, Kilmalcolm, Renfrewshire; James Sim Wallace, B.Sc., Shawlands, Glasgow; James Alexander Wilson, Langley Moor, Durham; John Zuill, M.A., Buchlyvie, Stirling.

ROYAL COLLEGE OF SURGEONS IN IRELAND.—FELLOWSHIP EXAMINATION.—The following gentleman, having passed the necessary examination, has been admitted a Fellow of the College:—

Patrick Joseph Murphy (Thomastown, co. Kilkenny), L.R.C.S.I. 1881, and L.R.C.P.I. 1881.

CHILDREN'S HOSPITAL, PENDLEBURY.—The medical statement for the past year states that disease of the digestive organs, the result of improper feeding and insanitary conditions, directly or indirectly, was the most fatal of any class of disease with which they had to deal, giving rise to some 35 per cent. of the fatal cases of infants under two years of age. With reference to infant insurance, it was found, of the fatal cases occurring at the Dispensary, that out of 213 cases in which information was obtained, 144 were in a club at the time of death, and 70 were not. Mr. Wm. Agnew has announced his intention to endow another cot with a sum of £1000. The financial position shows an accumulated deficit amounting to £2300.

SUPERANNUATION GRANT.—Mr. F. A. Willington, M.R.C.S., lately medical officer for the district and workhouse of the Ecclesall Bierlow Union, has been granted a superannuation allowance of £80 per annum.

BATH ROYAL UNITED HOSPITAL.—The Mayor of the borough on Monday opened the new Children's Ward of this institution. The buildings just completed form an additional storey to the Albert Wing, and will accommodate twenty beds. The cost is £2060, towards which £1680 has been raised.

FOOTBALL CASUALTIES.—At Gateshead, on Saturday, whilst playing at football, a youth aged fourteen, in a scrimmage, broke his right leg.—At a league match at Sunderland, on the same day, between Sunderland and Notts County, a Sunderland player, to score a goal, charged the Notts goal-keeper, the latter sustaining a fracture of his right leg.

WESTMINSTER MEMORIAL HOSPITAL, SHAFTESBURY.—The annual report for 1890 shows that the work during the year was exceptionally heavy and expensive. Twelve operations were performed in the hospital, and the number of patients averaged six a week of five weeks each. There were sixty-five patients during the year, making a total of 846 since the hospital was opened. The endowment fund now amounted to £3589. The income and expenditure statement showed a balance in hand of £94 10*s.* 6*d.*

CITY OF LONDON DISPENSARY.—Mr. F. P. Alliston presided at the annual meeting held last week at the dispensary. The institution was founded in 1789, and continues to maintain its usefulness and efficiency. During the year 11,865 patients received treatment, and 10,848 were discharged cured or benefited. The balance-sheet of receipts and disbursements shows a sum of £221 in the treasurer's hands, but there were liabilities amounting to £500.

COLLEGE OF STATE MEDICINE.—The following gentlemen, having been duly proposed and seconded, were elected Associates of the College at a meeting of Council held on Jan. 22nd:—William Geo. Barras, M.B., C.M. Glas., L.S.S. Durh. Univ., Govan, N.B.; Robert Cattley, M.B., C.M. Edin., D.P.H. Camb., Monkgate, York; Dr. Alexander Macindoe, D.P.H. Camb., Willoughbridge, Market Drayton; Dr. William Francis Menzies, B.Sc. Edin., County Asylum, Rainhill; Hamilton C. Reid, M.B., C.M. Glas., D.P.H. Fac. P. and S. Glasg., Coatbridge.

METROPOLITAN HOSPITAL SATURDAY FUND.—A largely attended meeting of the delegates of this Fund was held at the offices, Farringdon-street, on Saturday last, for the purpose of considering a report relating to the office staff and the salaries paid, which had been prepared by a special committee. Mr. Acland, chairman of the Fund, presided. The committee reported that what was required was one efficient person as secretary, whose duty should be to direct the whole of the work, and make recommendations as to the future office staff, which would effect a saving of £300 a year. On a motion for the adoption of the report, a long and desultory discussion ensued. Ultimately an amendment was carried, to the effect that so much of the report as referred to the question of dual control should be adjourned for six months. Meantime the secretaries should be provided with sufficient clerical assistance.

OBSTETRICAL SOCIETY OF LONDON.—The following list of officers for the ensuing year has been recommended by the Council:—President: Dr. Watt Black. Vice-presidents: Drs. Percy Boulton, Corry (Belfast), Hayes, W. A. Meredith, and Tapson; Mr. Evan Jones (Aberdare). Treasurer: Dr. Ernest Herman. Chairman of the Board for the Examination of Midwives: Dr. Champneys. Honorary Secretaries: Mr. Alban Doran and Dr. Peter Horrocks. Honorary Librarian: Dr. William Duncan. Other members of Council; Drs. Frederick William Coates (Salisbury), Charles James Cullingworth, W. Radford Dakin, S. Houston Davson, John H. Galton, Henry Gervis, Wiliam Lenton Heath, Joseph Johnston, Henry Ambrose Leciard (Carlisle), Henry Colley March (Rochdale), Thomas Cargill Nesham (Newcastle-on-Tyne), Joseph Henry Philpot, John Baptiste Potter, and Herbert R. Spencer; Messrs. Albert Charles Butler-Smythe, Henry W. Freeman (Bath), G. R. Turner Phillips, and Harry Speakman Webb (Welwyn).

THE ANIMALS' INSTITUTE. — At a recent special meeting of the Council of this Institute it was decided to appeal to the public for subscriptions to enable them to carry out their scheme of rendering aid to injured horses on the London streets. They propose to have ambulance carriages in available places, fully equipped with necessary appliances. Attention was specially called to the cruelty of the practice of mixing salt with the snow on the streets. Subscriptions and donations may be sent to the hon. treasurers, Lady Florence Pelham Clinton and Lady Frances Trevanion.

PRESENTATIONS.—Dr. Robert Lunan of Blairgowrie, Perthshire, has been presented, at a public meeting held in that town, on the occasion of his retirement from the profession, with an illuminated address and a silver dinner service, together with a diamond and pearl necklet for Miss Lunan.—Mr. P. F. Sturridge, L.R.C.P.Ed., M.R.C.S., has been presented by the railway *employés* at the Kendal station with a silver-mounted umbrella, suitably inscribed, in recognition of his services as lecturer to the class in connexion with the St. John Ambulance Association.

THE METROPOLITAN HOSPITAL. — The annual meeting of the governors of this hospital was held on Wednesday at the institution, Kingsland-road. Mr. Joseph Fry (chairman of committee) presided. The secretary (Mr. C. H. Byers) read the fifty-fifth annual report of the committee, which stated that the in-patients had increased from 489 in 1889 to 709 last year, and the new out-patient cases from 9482, representing 16,411 attendances, to 14,104, representing 23,074 attendances. In the provident department there had been 43,208 attendances. The receipts for the year had amounted to £6132 and the expenditure to £7528. To close up all the accounts connected with the building of the present hospital the committee had been obliged to borrow £6000 on mortgage.

METROPOLITAN ASYLUMS BOARD.—At the last meeting of the board the announcement was made that the admissions to the hospitals of the board during the last fortnight numbered 250, showing a decrease of 114 as compared with those of the preceding fortnight. Mr. Mann was elected secretary in place of Mr. Jebb, deceased.

NATIONAL ASSOCIATION OF SANITARY INSPECTORS, YORKSHIRE CENTRE.—The third annual meeting was held at Leeds on Saturday. Representatives of upwards of thirty sanitary authorities attended from all parts of Yorkshire. The president, Mr. T. Pridgin Teale, occupied the chair, and in his address congratulated the Association on its continued satisfactory progress. Of the public matters which were of interest to the meeting, he specially urged the adoption in Leeds of the Act for the Compulsory Notification of Infectious Disease, which was supported by other speakers. Mr. G. Paul, of Knaresborough, read a paper on the relation of meteorology to public health. An interesting discussion followed. Mr. Tarvis, of Halifax, was elected chairman, in the place of Mr. James Chambers, resigned.

METROPOLITAN ASYLUMS BOARD.

Return of Patients remaining in the several Fever Hospitals of the Board at midnight on January 27th, 1891.

Hospital.	Beds occupied.						Total accommodation.
	Scarlet fever.	Diphtheria.	Typhus fever.	Enteric fever.	Other diseases.	Total.	
Eastern Hospital	256	45	2	54	2	359	442
North-Western Hospital	269	35	..	8	..	312	443
Western ,,	157	16	..	16	1	190	262
South-Western ,,	169	11	..	4	3	187	340
South-Eastern ,,	227	12	..	40	1	280	462
Northern ,,	278	19	..	21	..	318	480
Gore Farm ,,	33	..	..	..	..	33	300
Totals	1389	138	2	143	7	1679	2729

THE HOUSE OF LORDS' COMMITTEE ON HOSPITALS.

THE Committee of the House of Lords, which was appointed last Session, met again on Monday last to continue their inquiry. The reference to the committee is to inquire with regard to all hospitals and provident and other public dispensaries and charitable institutions within the metropolitan area for the care and treatment of the sick poor which possess real property or invested personal property in the nature of endowment of a permanent or temporary nature, and to receive evidence tendered by the authorities of voluntary institutions for like purposes, or with their consent in relation to such institutions, and to inquire as to what amount of accommodation for the sick is provided by rate and as to the management thereof.

Lord Sandhurst, as before, presided, and the other members of the committee present were—Earl Cathcart, the Earl of Arran, the Earl of Lauderdale, Lord Saye and Sele, Lord Zouche of Haryngworth, Lord Thring, and Lord Monkswell.

Guy's Hospital.

Mr. Edward Lushington, treasurer of Guy's Hospital, was the first witness examined. In reply to the Chairman, he said he had been for fifteen years treasurer of Guy's, and previously to that he had been for twenty-seven years in the Bengal Civil Service, in the financial department of the Government of India. Guy's Hospital was founded, he said, in about the year 1725, by a person named Guy, who made a will in which he defined what, in his opinion, should be the constitution of the hospital, and his will formed the basis of an Act of Parliament passed in 1726 or 1727. The constitution was as follows: There were sixty self-elected governors and a court of committees, consisting of nineteen members, selected from amongst the governors; and if any special necessity arose subcommittees were appointed to deal with particular matters. When he first became treasurer the sisters in charge of the wards were not trained nurses. They knew little or nothing about their duties when they came to the hospital, but learned them as they could. The matron, the medical superintendent, the chaplain, and assistant physicians and surgeons were elected or dismissed by the general body. The matron, whose duty it was to go round the wards every day, recommended to him the appointment of the sisters when a vacancy occurred, and they were selected from amongst the lady pupils who had had not less than a year's training in the hospital and who knew all about the work of the hospital and their respective duties. The probationers were appointed by the matron, and became nurses after eighteen months, provided that they conducted themselves properly. During their period of probation they could be dismissed by the matron. For the first month they had the option of terminating their engagement, but after that period they had to sign a paper saying that they would serve in the hospital for three years. The nurses were expected to be out of their dormitories at twenty minutes past seven; they breakfasted at half-past seven, and they entered the wards at eight o'clock; they dined in two batches, half-an-hour being allowed for dinner, from half-past eleven to twelve, and from twelve to half-past; they had tea from half-past four to five and from five to half-past; they had supper from half-past eight to nine and from nine to half-past, and they left the wards at a quarter to ten. The income from the estates had fallen from about £50,000 a year to £26,000, owing to the agricultural depression, before which they had never asked the public for a single sixpence. They had received altogether from the public £100,000, from which they took whatever was necessary to meet any deficiency. When they received a large donation of £400 or £500 they advertised the fact in the newspapers, and asked for further subscriptions.

Mr. Edward Cooper Perry, M.D., assistant physician to Guy's Hospital, Dean of the Medical School, demonstrator in morbid anatomy, and warden of the residential college, was then examined. In answer to the chairman, he explained the duties of the staff engaged in the residential college and the system of management. Last year the fees of the students at Guy's amounted to £11,000, of which £3000 was devoted to the expenses of the school, irrespective of the salaries of the lecturing staff.

St. Bartholomew's Hospital.

On Thursday Mr. W. A. Cross, clerk to St. Bartholomew's Hospital, was examined. He stated that the affairs of the hospital were conducted by an executive committee. He was a salaried officer. The steward would report to him.—The Chairman: As a general rule, do you not think it is inconvenient to have two heads, as in the case here? You are supreme in the absence of the treasurer, and at the same time you have a very important official who is indirectly under you.—The Witness: It would be much better to have one on the spot who had supreme authority. The system of accounts having been explained, and the method of checking them dealt with, the witness stated that the House Committee dealt with the estates of the hospital, which were situated in various counties, and comprised about 11,000 acres. The principal estates were in Essex, and the hospital had an agent in Chelmsford. The witness did not think the comparison of the rate per bed was a just one, as each individual hospital should be judged according to its own circumstances. He did not, however, mean to imply that a uniform system of keeping accounts in the various hospitals should not be tried. The figures representing the cost per bed published by the Charity Organisation Society were not trustworthy as far as St. Bartholomew's was concerned.—Lord Sandhurst: Have you had an outbreak of diphtheria recently in the hospital?—The Witness: Yes. We took into the hospital last year from the outside 140 cases of diphtheria, being double the number that we received on the previous year, and several of our nurses—twenty-three nurses and three ward assistants—have been attacked with more or less severe forms of diphtheria. The matter has engaged the very anxious attention of the treasurer and the almoners from the earliest development of that disease, and it is still under consideration.—Lord Sandhurst: Do you admit all cases of diphtheria?—The Witness: We have admitted all cases of diphtheria. We commenced this year to put diphtheria patients into a separate ward.—Lord Sandhurst: Do you take advantage of all the available space in your hospital for these patients?—The Witness: Oh, yes.—Lord Sandhurst: Have not you a magnificent hall in the centre of the third floor?—The Witness: Yes; the hall is not available for patients.—Lord Sandhurst: What is the

use of that hall?—The Witness: The governors hold their meetings—their court, and occasionally hold their annual dinner there.—Lord Sandhurst: Is that the only place where the governors could hold their court?—The Witness: According to the present arrangement.—Lord Sandhurst: How often does the Court of Governors meet?—The Witness: Once every three months, sometimes more frequently. After some further questions from the Chairman, Lord Cathcart pointed out to the witness that there was an idea abroad that the nurses in the hospital were suffering from something being wrong in the quarters given to them in the hospitals, and asked if the witness had any reason to suppose that that was so. The Witness: We had no reason to suppose that. Two months ago the surveyor was instructed to make a complete examination of the building.—Lord Cathcart: And then did you move the nurses away from the places they had formerly occupied?—The Witness: From some cubicles they were occupying.—Lord Cathcart: I suppose you removed the nurses for some reason?—The Witness: We moved the nurses away, as some scarlet fever had broken out in the room, for the purpose of disinfecting the whole place. Another reason was that we had increased accommodation for them.—Lord Cathcart: In the treasurer's house?—The Witness: No, that is at present used by the night nurses.—Lord Cathcart: And the removal had nothing to do with it?—The Witness: Nothing at all.—Lord Cathcart: With regard to the accounts, do you not think that if the cash book dissections were made on a uniform principle throughout the hospitals the cost per bed would be a good standard of comparison as between one hospital and another?—The Witness: I do not quite follow your lordship, but there would be great difficulties in doing so, and the disturbing element of the out-patient department would have to be got rid of. Lord Cathcart further examined the witness on the nature of the supervision exercised by the steward in reference to the food supplies for the hospital.

Lord Zouche: I suppose your buildings are very old?—The Witness: They were erected for the most part in the middle of last century. The rebuilding of the hospital began in the first quarter of the last century.—Lord Zouche: Do you think that any danger arises in connexion with infectious diseases from the antiquity of the building?—The Witness: I do not think there is any evidence of it so far as our hospital is concerned. The wards are frequently cleansed and repainted. Lord Zouche: Because it has been suggested that the walls might become impregnated with infection, and that might be communicated to sick persons. The Witness: I believe that our statistics of surgical results are very good indeed, which would hardly be the case in a hospital impregnated with infection.—Lord Zouche: I suppose every care is taken to keep everything clean—the paint of the wards &c.,—is it not?—The Witness: Oh, yes; and if there is any case of infectious disease in a ward, and the surgeon suggests that it is desirable to clean it, there is never any hesitation about doing so.—Lord Zouche: You would not state that this outbreak was in consequence of the antiquity of the building.—The Witness: Personally I have never heard it suggested.

In answer to Lord Monkswell, the witness stated that the governors did not contemplate enlarging the hospital until they got an extended area. With regard to the outbreak, Lord Monkswell asked what the surveyor had discovered wrong with the hospital. The Witness: He could not discover anything to account for the illness, but he pointed out that some of the appliances were not of the most modern type, and that they should be made so. We at once gave orders for the substitution of newer appliances in their stead.—Lord Monkswell: Do the ward assistants sleep in the hospital?—The Witness: I think there are two who sleep out, but as a rule they sleep in the hospital.—Lord Monkswell: Are the ward sisters put up in sanitary bedrooms?—The Witness: Yes, I think so.—Lord Monkswell: Are not they sometimes made to sleep in a room low down in the building, almost on the ground?—The Witness: No. The ward assistants sleep, some on the upper floor, and some on the second floor in the nurses home.—Lord Monkswell: But is there no person connected with the hospital who sleeps in bedrooms partly below ground?—The Witness: I think I know what your lordship refers to. Some of the male attendants in connexion with the resident staff sleep below ground, but the rooms are at present being raised.—Lord Monkswell: Did they suffer from illness?—The Witness: There was one attendant there who last summer had diphtheria.—Lord Monkswell: And might not this be traced to the insanitary nature of his bedroom?—The Witness: I say I do not know.—Lord Monkswell: Was there any other case of illness arising from bedrooms being partly underground?—The Witness: No, none that I have ever heard of.

Lord Cathcart: Can you tell me exactly what is being done regarding the sanitary condition of the hospital?—The witness stated that a different kind of waste trap for the sinks situated in a little room off the wards had been provided. The waterclosets had not been objected to.—Lord Cathcart: Have the sanitary arrangements below ground been altered?—The Witness: No. Merely the traps and the sinks have been altered.—Lord Cathcart: Can you suggest some other things which have been done?—The Witness: I am afraid I cannot charge my memory with the details of the improvements in ventilation, in waste-pipes, and putting special traps under ground.—Lord Cathcart: Are you going to do that?—The Witness: That is being done. In addition to this report from the surveyors, the governors have called in an expert in sanitary matters to advise them generally on the drainage. There is no ground, I believe, for thinking the drainage has had anything to do with the outbreak.

Dr. Norman Moore, warden of St. Bartholomew's Hospital, was the next witness. Questioned by the President as to the out-patient departments in hospitals, witness thought their demolition would inflict serious injury on the progress of medical study in this country. In reply to Lord Thring, the witness thought there was some risk of infection being spread by the congregating of large numbers of people in out-patient departments. The income of the school attached to St. Batholomew's Hospital last year was about £14,000 and the expenses £4000, the remaining £10,000 being divided among the lecturers.

Mr. Cross having been recalled, said the day nurses went on duty at 7 A.M., remaining till 9 P.M., time being allowed for lunch, dinner, and tea. Some part of the nurses' duties consisted of ward sweeping, but they were relieved to a very great extent by the ward maids.

The Committee adjourned till Monday next.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.

ABBOTT, C. E., L.R.C.P., L.R.C.S. Irel., has been reappointed Medical Officer of Health to the Braintree Urban and Rural Sanitary Districts.

BALE, WM., M.R.C.S., has been reappointed Medical Officer for the Heaton Norris District of the Stockport Union.

BURY, A. T., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer for the Butterton and Grindon District of the Leek Union.

CARLINE, W. A., M.D. Aberd., M.R.C.S., has been appointed Surgeon to the Lincoln County Hospital, vice Wilkinson, resigned.

COOKE, W. C., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer of Health for the Urban Sanitary District of Bognor.

CRANSTONE, W. L., M.R.C.S., has been appointed Medical Officer for the Shire of Swan Hill, Lower Murray Riding, Victoria.

CROSS, W. J., M.B. Toronto, L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer for the Central and South Ridings, in lieu of the whole Shire of Arapiles.

DAKEYNE, T. E., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer for the Leekfrith District of the Leek Union.

ESLER, A. W., M.D., M.Ch. Irel., has been appointed Medical Officer for the Borough of Heathcote, Victoria, vice Scobell, deceased.

FOX, J. A., L.R.C.P. Lond., L.R.C.P. & L.R.C.S. Edin., L.F.P.S. Glasg., L.S.A. (1885), L.S.A. (Med. Act, 1889), has been appointed Honorary Surgeon to the West Cornwall Infirmary and Dispensary, Penzance.

FRANEY, EDWARD, M.R.C.S., has been reappointed Medical Officer of Health for the Banbury Rural District.

GAILEY, J. A., M.D. Edin., has been appointed Medical Officer for the Norton and Endon Districts of the Leek Union.

HART, D. B., M.D. Edin., F.R.C.P., has been appointed Medical Officer of the Edinburgh Royal Maternity and Simpson Memorial Hospital.

HASLETT, W. J., M.R.C.S., L.R.C.P. Lond., has been appointed Resident Clinical Assistant to St. Luke's Hospital for Lunatics, E.C.

HOOLE, JOHN, M.R.C.S., L.S.A. Lond., has been appointed Medical Officer to the Anglo-Chilian Nitrate and Railway Company at Tocopilla, Chili.

KELYNACK, T. N., M.B., Ch.B., has been appointed Pathological Registrar to the Manchester Royal Infirmary, vice R. B. Wild, resigned.

MARSHALL, G. B., M.B., C.M. Edin., has been appointed House Surgeon to the Edinburgh Royal Maternity and Simpson Memorial Hospital.

NUNN, P. W. G., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health for the Borough of Bournemouth.

ROSS, C., M.B., C.M. Edin., has been appointed Medical Officer for the Shire of St. Arnaud, Warnacknabeal Division, Victoria.

SANDERS, W. G. W., M.B., C.M. Edin., has been appointed Pathological Assistant Medical Officer to the County Asylum, Rainhill, Edinburgh.

SEARLE, G. C., M.R.C.S., has been reappointed Medical Officer of Health for Brixham.

SHAW, CECIL EDWARD, M.A., M.D., M.Ch., has been appointed Honorary Laryngeal Surgeon to the Hospital for Consumption, Belfast.

SHIELDS, GEORGE, M.B., C.M. Edin., has been appointed Medical Officer for the First Division of the Greystoke District of the Penrith Union.

SHIRRES, GEORGE, M.B., C.M. Aberd., has been appointed Assistant Medical Officer to the Board of Health, Victoria.

SOMERVILLE, A., M.D., L.R.C.P., F.R.C.S. Edin., has been appointed Medical Officer for the Longnor District of the Leek Union.

SOULBY, C. ERNEST, L.R.C.P. Lond., M.R.C.S., L.S.A., has been appointed House Surgeon to the Middlesex Hospital.

STEPHENS, RICHARD J., M.R.C.S., L.S.A., has been appointed Assistant Medical Officer to the Wilts County Asylum.

SWINDELLS, J. A., M.R.C.S., has been appointed Medical Officer for the Shire of Glenlyon, Victoria.

THOMAS, ROBERT STANLEY, M.A., M.B., B.C. Cantab., has been appointed House Surgeon to the Middlesex Hospital.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement.

ADDENBROOKE'S HOSPITAL, Cambridge.—Resident House Physician. Salary £65 per annum, with board, lodging, and washing in the Hospital.

CENTRAL LONDON OPHTHALMIC HOSPITAL, Gray's-inn-road, W.C.—House Surgeon.

CENTRAL LONDON SICK ASYLUM DISTRICT.—Assistant Medical Officer and Dispenser for the Asylum in Cleveland-street. Salary £100 per annum, with board and residence. (Apply to the Clerk to the Managers, Cleveland-street Asylum, Cleveland-street, W.)

CHELMSFORD UNION.—Medical Officer, including the office of Public Vaccinator, for the sixth district of this Union. (Apply to the Clerk, Chelmsford.)

CHELSEA HOSPITAL FOR WOMEN, Fulham-road, S.W.—Physician to the Out-patients. The office is honorary.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE SKIN, Victoria-park, E.—House Physician for six months. No salary, but board and residence, and an allowance for washing provided. (Apply to the Secretary, 24, Finsbury-circus, E.C.)

COUNTY COUNCIL FOR THE COUNTY OF DERBY.—Medical Officer of Health for the Administrative County of Derby. Salary £600 per annum, with £200 extra for travelling and other expenses. (Apply to the Deputy Clerk to the County Council, 40, St. Mary's Gate, Derby.)

COUNTY OF FIFE.—County Medical Officer for the counties of Fife and Clackmannan, to act also as Medical Officer for the four districts of the County of Fife and for the County of Clackmannan. Salary for the combined offices £600, with travelling expenses. (Apply to Mr. Patrick, County Clerk, Cupar, Fife.)

DORSET COUNTY HOSPITAL, Dorchester.—House Surgeon to reside and board in the hospital. Salary £70.

EAST SUFFOLK AND IPSWICH HOSPITAL.—Assistant House Surgeon. Salary £20 per annum, board, lodgings, and washing allowed. (Apply to the Secretary, Thorofare, Ipswich.)

FARRINGDON GENERAL DISPENSARY AND LYING-IN CHARITY, 19, Bartlett's-buildings, Holborn, E.C.—Honorary Physician.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, Bloomsbury, W.C.—Resident Medical Officer required as House Physician for one year. Salary £60 per annum, with board and residence in the hospital.

HUDDERSFIELD INFIRMARY.—Junior House Surgeon. Salary £40 per annum, with board, lodging, and washing.

LONDON FEVER HOSPITAL, Liverpool-road, N.—Physician.

LONDON FEVER HOSPITAL, Liverpool-road, N.—Assistant Physician.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Albany Memorial), Queen-square, Bloomsbury.—Surgeon.

NATIONAL SANATORIUM FOR CONSUMPTION AND DISEASES OF THE CHEST, Bournemouth.—Clinical Clerk for four months. No salary, but board, lodging, and washing provided.

NOTTINGHAM GENERAL HOSPITAL.—Resident Surgical Assistant for six months. No salary, but board, lodging, and washing provided in the hospital.

NOTTINGHAM GENERAL HOSPITAL.—Resident Medical Assistant for six months. No salary, but board, lodging, and washing provided in the hospital.

ROYAL ACADEMY OF ARTS.—Professorship of Anatomy. (Apply to the Secretary.)

ST. MARK'S HOSPITAL FOR FISTULA AND OTHER DISEASES OF THE RECTUM, City-road, London, E.C.—Anæsthetist. Honorarium £50 per annum.

WINCHCOMB UNION.—Medical Officer for the No. 2 or Vale District of this Union. Salary £65 per annum, and in addition, midwifery, surgical, and vaccination fees. (Apply to the Clerk, Winchcomb.)

Births, Marriages, and Deaths.

BIRTHS.

MOIR.—On Jan. 22nd, at Cassillis-road, Maybole, N.B., the wife of James Moir, Physician and Surgeon, of a son.

PIDCOCK.—On Jan. 17th, at Fitzjohn's-avenue, Hampstead, the wife of G. Douglas Pidcock, M.A., M.D., M.R.C.P., of a son.

WAKEFIELD.—On Jan. 20th, at The Beacon, Guildford, the wife of Horace Wakefield, M.R.C.S.E., L.R.C.P., of a daughter.

MARRIAGES.

BROWN—MAPLESTONE.—On Jan. 21st, at the Parish Church, St. Mary's, Aldeby, Norfolk, William Henry Brown, B.A., M.R.C.S., of Northumberland-square, North Shields, to Fanny Sophia, only child of John Maplestone, The Grove, Aldeby, Norfolk.

CLARKE—JOPLIN.—On Jan. 14th, at St. Matthew's, Thorpe Hamlet, Norwich, William Frederick Clarke, M.D., B.S., to Amy Robertson, daughter of the late Rev. J. J. Joplin, of Halifax, Nova Scotia.

MOORE—PALMER.—On Nov. 11th, at South Yarra, Melbourne, George Ogle Moore, M.R.C.S., eldest son of J. J. Ogle Moore, to Ethel M'Crae, second daughter of the late T. W. Palmer.

WALSH—PENNELL.—On Jan. 21st, at St. Paul's Church, Sheerness, James Joseph Walsh, Surgeon, R.N., to Eveline Mary, eldest daughter of Col. Pennell, K.A.V., of Sheerness.

DEATHS.

CARMICHAEL.—On Jan. 24th, at 227, Oldfield-road, Salford, William Carmichael, R.A., M.R.C.S., aged 44. No cards.

FERNIE.—On Jan. 22nd, at Macclesfield, Henry Mortlock Fernie, F.R.C.S., youngest son of the late Rector of Yelden, Beds, aged 53.

MARKHAM.—On Jan. 23rd, at Nightingale-lane, Clapham-common, W. O. Markham, M.D., F.R.C.P., in the 73rd year of his age.

MOSELEY.—On Jan. 22nd, at his residence, Wilbury-road, West Brighton, George Moseley, F.R.C.S.E., aged 65.

WARING.—On Jan. 22nd, at Clifton-gardens, W., Surgeon-Major (Retired) Edward John Waring, M.D., F.R.C.P., F.R.C.S., C.I.E., late Indian Medical Service, Madras, aged 71.

WELLS.—On Jan. 21st, at Randolphs, Biddenden, Kent, Robert Wells, F.R.C.S., in his 84th year.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

Medical Diary for the ensuing Week.

Monday, February 2.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations daily at 10 A.M.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.

CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.

ST. MARK'S HOSPITAL.—Operations, 2.30 P.M.; Tuesday, 2.30 P.M.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.

UNIVERSITY COLLEGE HOSPITAL.—Ear and Throat Department, 9 A.M.; Thursday, 9 A.M.

LONDON POST-GRADUATE COURSE.—Royal London Ophthalmic Hospital, Moorfields: 1 P.M., Mr. W. Lang: Conjunctival Diseases.—London Throat Hospital, Great Portland-street: 8 P.M., McNeill Whistler: Syphilis as it affects the Larynx.

ROYAL INSTITUTION.—5 P.M. General Monthly Meeting.

ODONTOLOGICAL SOCIETY OF GREAT BRITAIN (40, Leicester-sq., W.C.).—8 P.M. Dr. F. Silk: Clinical Observations on Bromide of Ethyle as an Anæsthetic in Dental Surgery, with recorded cases.—Mr. Sewill: The Etiology of Empyema of the Antrum.—Mr. Charters White: A New Method of Demonstrating Dental and Osseous Structures in Microscopical Specimens.—Mr. Storer Bennett: A case of Alveolar Abscess of three years' duration caused by the perforation of the side of a root.—Mr. Ackery: Some cases of Eruption of Teeth in Abnormal Positions. Short Inaugural Address by the President.

SOCIETY OF ARTS.—8 P.M. Mr. A. J. Hipkins: The Construction and Capabilities of Musical Instruments. (Cantor Lecture.)

MEDICAL SOCIETY OF LONDON.—8.30 P.M. Dr. S. Mackenzie: Anæmia, its Pathology, Symptoms, and Treatment. (Third Lettsomian Lecture.)

Tuesday, February 3.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.; Fridays and Saturdays at the same hour.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic operations, 4 P.M.; Friday, 2 P.M.

CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M. Electro-therapeutics, same day, 2 P.M.

LONDON POST-GRADUATE COURSE.—Bethlem Hospital: 2 P.M., Dr. Savage: Delusional Insanity, Moral Insanity.

ROYAL INSTITUTION.—3 P.M. Prof. V. Horsley: The Structure and Functions of the Nervous System.

SOCIETY OF ARTS.—8 P.M. Mr. William Simpson: Lithography, a Finished Chapter of Illustrative Art.

THE SANITARY INSTITUTE (Parkes Museum, Margaret-st., W.).—8 P.M. Mr. H. Law: Principles of Calculating Areas, Cubic Spaces, &c.; Interpretation of Plans and Sections to Scale.

PATHOLOGICAL SOCIETY OF LONDON.—8.30 P.M. Professor Crookshank: Researches on the Morphology, Cultivation, and Products of the Tubercle Bacillus.—Professor Crookshank and Dr. Phineas Abraham: Tubercular Guinea-pigs treated by Koch's Method.—Mr. Stephen Paget: Imperforate Rectum.

Wednesday, February 4.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M. Operations by the Obstetric Physicians on Thursdays at 2 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.

CHARING-CROSS HOSPITAL.—Operations, 3 P.M., and on Thursday and Friday at the same hour.

ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.

LONDON HOSPITAL.—Operations, 2 P.M. Thursday & Saturday, same hour.

ST. PETER'S HOSPITAL, COVENT-GARDEN.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.

GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 1.30 P.M.; Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.

CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M.; Surgical Visits on Wednesday and Saturday at 9.15 A.M.

LONDON POST-GRADUATE COURSE.—Hospital for Consumption, Brompton: 4 P.M., Dr. C. Y. Biss: The Diagnosis of Intrathoracic Aneurysms.—Royal London Ophthalmic Hospital, Moorfields: 8 P.M., Mr. J. B. Lawford: Optic Neuritis.

OBSTETRICAL SOCIETY OF LONDON (20, Hanover-square, W.).—8 P.M. Specimens will be shown. Annual Meeting. Election of Officers and Council. The President (Dr. Galabin) will deliver the Annual Address. Discussion on the Examination and Registration of Midwives.

SOCIETY OF ARTS.—8 P.M. Mr. J. E. Dowson: Decimal Coinage, Weights and Measures.

Thursday, February 5.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Ear and Throat Department, 9 A.M.

LONDON POST-GRADUATE COURSE.—National Hospital for the Paralysed and Epileptic: 2 P.M., Lecture by Dr. Gowers.—Hospital for Sick Children, Great Ormond-st.: 4 P.M., Dr. Barlow: The Clinical Aspects of Rickets.—London Throat Hospital, Gt. Portland-st.: 8 P.M., Dr. E. Law: Catarrh of the Middle Ear, and Methods of Inflation.

ROYAL INSTITUTION.—3 P.M. Mr. Hall Caine: The Little Manx Nation.

HARVEIAN SOCIETY OF LONDON.—8.30 P.M. Sir Edward H. Sieveking: Falmouth as a Health Resort.

Friday, February 6.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
LONDON POST-GRADUATE COURSE.—Hospital for Consumption, Brompton: 4 P.M., Dr. C. Y. Biss: The Treatment of Intrathoracic Aneurysms.
THE SANITARY INSTITUTE (Parkes Museum, Margaret-st., W.).—8 P.M. Dr. Louis Parkes: Water Supply, Drinking Water, Pollution of Water.
WEST LONDON MEDICO-CHIRURGICAL SOCIETY (Board-room, West London Hospital).—8 P.M. Ordinary Meeting. Mr. Percy Dunn will show some Pathological Specimens. Dr. Clemow: Observations upon the Treatment of certain cases of Fatty Heart.—Mr. Rickard Lloyd: Practical Notes on the Administration of Ether and Chloroform.—Dr. Alderson: A case of Attempted Suicide by Chloroform.
ROYAL INSTITUTION.—9 P.M. The Right Hon. Lord Rayleigh: Some Applications of Photography.

Saturday, February 7.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; and Skin Department, 9.15 A.M.
LONDON POST-GRADUATE COURSE.—Hospital for Diseases of the Skin, Blackfriars: 2 P.M., Dr. Payne: The Different Forms of Alopecia.—Bethlem Hospital: 11 A.M., Dr. Percy Smith: Clinical Demonstration.
ROYAL INSTITUTION.—3 P.M. Mr. W. Martin Conway: Pre-Greek Schools of Art.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Jan. 29th, 1891.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Rainfall.	Remarks at 8.30 A.M.
Jan. 23	29·71	W.	41	40	56	50	36	·01	Overcast
,, 24	29·59	S.W.	49	48	54	50	41	·23	Overcast
,, 25	30·00	S.W.	39	38	65	50	38	·27	Bright
,, 26	30·10	S.W.	42	41	72	49	37	..	Cloudy
,, 27	29·94	S.W.	44	42	59	49	42	..	Cloudy
,, 28	30·03	S.W.	47	46	59	52	44	·01	Cloudy
,, 29	29·94	S.W.	48	47	..	49	47	·07	Raining

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET to be addressed "To the Publisher."

We cannot undertake to return MSS. not used.

PHYSICAL TRAINING.

A CORRESPONDENT, under the pseudonym "Dragoon," favours us with the following interesting note on the results of a case of systematised physical training observed at the Gymnasium Cavalry Barracks, Canterbury.

"Corporal A. U—— joined a hussar regiment as a recruit in the spring of 1888. He went through a three months' recruit's (gymnastic) course in England, through a six months' course in India, and has just finished another six months' course in England. He is now a qualified instructor. The following table shows the results of these gymnastics upon the man's frame.

Date.	Age.	Height.	Weight.	Girth of Chest.	Forearm.	Upper Arm.
July 5, 1888.	19⅝ yrs.	5 ft. 6½ in.	10 st. 7½ lb.	35½ in.	11 in.	11¼ in.
Oct. 5, ,,	19⅞ ,,	Not taken	11 st.	38 ,,	12⅜ ,,	12 ,,
Jan. 26, 1891.	21⅛ ,,	5 ft. 8 in.	11 st. 11½ lb.	41 ,,	13⅜ ,,	15 ,,

Thus it will be seen that in two years and a half this man has gained 1½ in. in height, 18 lb. in weight, 5½ in. in girth of chest, 2⅜ in. in girth of forearm, and 3¾ in. in girth of biceps. These figures are more eloquent than words."

Mr. A. Webster.—Goodhart or Angel Money, or the fuller treatises of Eustace Smith and Meigs and Pepper.

MORTALITY FROM THE BITES OF SNAKES AND ATTACKS OF WILD ANIMALS IN INDIA.

ACCORDING to the latest official return, the number of deaths from snake-bites and attacks of wild beasts in India is still on the increase, in spite of the large sums which are spent yearly on rewards for the destruction of these scourges. In 1888 the number of human victims to snakes and ferocious beasts was 22,970, and of cattle 76,271. Of the former number 20,571 deaths were due to snake-bites, 975 were caused by tigers, 184 by leopards, 139 by wolves, 110 by bears, 57 by elephants, and the remainder by other animals (scorpions, dogs, foxes, crocodiles, lizards, wild boars, &c.). In 1881, on the other hand, the number of cattle killed was 43,669; in 1885, 59,029; and in 1887, 68,840; while the number of persons killed each year since 1880 varies from 21,000 to 24,000. During the same period the work of destruction of wild beasts and snakes has advanced, as has also the expenditure for rewards. In 1888 20,709 wild beasts were destroyed, and 511,948 snakes. The total amount paid in rewards was Rs. 159,253. In 1880 14,800 wild beasts and 212,776 snakes were killed, at a cost of Rs. 99,992. In 1884 and 1885 the expenditure exceeded two lakhs of rupees.

Dr. E. G. Younger.—The best treatment of such articles is, probably, to take no notice of them. It is sad indeed for the readers of the periodical quoted if the stuff given in the quotations constitutes the most interesting article in the January number.

Nemo.—The L.S.A. is certainly not the highest qualification. The value of degrees must depend on the completeness of the examinations after which they are granted.

L.R.C.P.—The information desired will be found in Martindale's Extra Pharmacopœia.

ASSISTANTS.

To the Editors of THE LANCET.

SIRS,—This will be the last letter from me on the above subject, as I start abroad this evening. When I return perhaps I shall have more to say. The letter of the writer "X. Y. Z." in THE LANCET of Jan. 24th, I characterise as a senseless piece of sarcasm, evidently written by one of no practical experience as an assistant, as he admits himself "that he never was one, nor should he be." Such an admission proves his utter inability to cope with the subject. I have been both an unqualified and qualified assistant, and, before I entered University College Hospital in Gower-street, served a pupilage to a surgeon attached to a large Union Infirmary and lying-in hospital, after which I was fortunate enough to obtain an assistancy in the neighbourhood of Russell-square during the four years at the hospital. The statement "X. Y. Z." mentions about his principal wanting him to "dub" himself to his patients as a qualified man whilst he was a student is the exception. I deny *in toto* that it is the invariable rule. It is a gross calumny to level at practitioners who employ them. Why did he not, for the sake of the profession, expose this gentleman? My principal was quite a different man to that. "X. Y. Z." talks about "protecting the public against unqualified persons." I am sorry to say, before the law steps in, something should be done to protect the public from qualified assistants, who enter the ranks perfectly ignorant of midwifery—at least, any operative part. Whilst acting as assistant in the W.C. district my principal, who was away, had a locum (L.R.C.P., M.R.C.S.) who attended a lady near Bedford-square in confinement. Post-partum hæmorrhage set in to an alarming extent from a retained placenta. The locum sent for me. Now, I was the unqualified assistant. Ought I to have introduced myself as the unqualified assistant? In all probability, if I had done so, I should have been told to go. Now, "X. Y. Z." wishes all unqualified assistants to be known as such to their patients. Instead of doing that, I helped my friend, and introduced my hand and emptied the uterus. Did I do rightly? Several other cases I could mention. As to pharmaceutical men acting as assistants, that, again, is an exception, not the rule. Apologising for thus troubling you with such a long letter,

I am, Sirs, your obedient servant,

Jan. 26th, 1891. JUSTUS, M.B. EDIN.

To the Editors of THE LANCET.

SIRS,—I, for one, do not think unqualified assistants ought to be ignored, but that the employment of them should be restricted as much as possible. Your correspondent, "X. Y. Z.," considers them very useful. Well, so they are to a man holding many public appointments in addition to a large private practice; too many appointments, indeed, for him to attend to personally, so he obtains an unqualified assistant, who does work—after a fashion—that ought to be performed only by a qualified man. Also, the employer takes very good care to hide the fact that his assistant is—to put it in the euphemistic terms of an advertisement column—"*sine* diploma."

I think it ought to be a law with the Local Government Board that they do not sanction any man holding a plurality of appointments unless he *does* (not *can*) attend personally to them, or has a properly qualified assistant to help him in the discharge of his duties, and that no man holding any public appointment shall employ any unqualified person other than a dispenser, who, under no circumstances, shall visit, attend to, or prescribe, to assist him in the performance of his duties either in private or public practice. If the above were the law, then there would be few, if any, unqualified men acting as assistants. Qualified men would get employment at a fair remuneration, fees would

improve all the way round, and last, but not least, the social status of the profession would be vastly higher in a very few years than it is at present.

Here is a case in point. Near me lives a medical man who has all the usual district appointments, an extensive country practice, and he is a medical officer of health to a large rural district and to a town several miles away from his residence. How can he attend to all his duties himself? If he were like Sir Boyle Roche's bird, he might be able to attend to all his duties at the same time; but to help him he has an unqualified assistant. Now I say that if it is worth while having these many appointments, surely it ought to be worth while to have a properly qualified assistant. I think I ought to say that I am not an assistant "out of place." I am, Sirs, yours truly,

Jan. 23rd, 1891. DIPLOMA.

To the Editors of THE LANCET.

SIRS,—In reference to my letter, published in your issue of the 3rd inst., first, I have to thank you for the readiness with which you inserted it, and opened up this important subject. Upon further consideration I fear that no member of the Medical Council will reply to it. To my mind the reason is that the Medical Council, as a body, are out of touch with the hard-worked general practitioner. I would be inclined to think that there is not one member of it who ever was so placed as to require the services of an unqualified assistant. If this be so, how then can they speak on this subject? From which I infer that until the general practitioners of England, Ireland, and Scotland are represented (why not?) on the Medical Council this question will remain *in statu quo*. At present the consultants, hospital surgeons, professors, and specialists, in my opinion, are only on it—where is the general practitioner who can only put M.R.C.S. after his name on the Medical Council? England, Ireland, and Scotland should have at least one general practitioner on the Council; then the subject of bone-setters, consulting phrenologists, travelling quacks, and unqualified assistants—they are all about one—would receive attention. I venture to think that it would not then be so easy for any man to put on a tall hat and pair of gloves, and go visiting. I remain, Sirs, yours faithfully,

Jan. 27th, 1891. G. P.

To the Editors of THE LANCET.

SIRS,—Your correspondent's—"X. Y. Z."—letter has raised a point which I have often thought of myself. His principal, I consider, did not wish him to be a "party to a gross fraud." It all arises from our technical use of the word "qualified." If patients are told that the assistant is unqualified, they are apt to take it in the general sense of not being fitted to treat cases, and naturally object to his attendance. This is a fact. I am myself a qualified assistant, successor to six or eight unqualified men, and on various occasions—for instance, taking a midwifery case that my principal had promised to attend personally—I have had occasion to explain the difference between myself and my predecessors. The easiest way I have generally found was to say that, comparing our profession to the church, I was like a curate in full priest's orders, whereas the men before me were like deacons; and to give the example that an unqualified man could not sign a death certificate or examine for life assurance, just as a deacon could not read the absolution in church. It would be well, I think, to limit the term "assistant" to unqualified men, and to call the qualified assistant "salaried partner," or better still, "temporary partner," which would at the same time tend to neutralise the prejudice at first against "the young doctor." I am, Sirs, yours faithfully,

Jan. 24th, 1891. C. A. L.

THE STAFFORDSHIRE KNOT AND ITS ADVANTAGES.

To the Editors of THE LANCET.

SIRS,—Having during an extensive practice of some years tied daily the Staffordshire knot in preference to all other forms, reef or surgical, I deem it the ideal knot if properly manipulated, so much so that I receive it, as part of my surgical creed, to be absolutely infallible and to be superior to any other form, whether practised by the most brilliant operator or an ordinary unskilled hand. The following cases are demonstrative—viz.: 1. As to its rapid execution if performed according to Tait's first method, to its absolute safety, and to its easy manipulation. 2. Comparative surgery. On animals I have known the prolapsed uterus to be successfully removed with an ordinary pocket knife and whipcord ligature (tied with the Staffordshire knot) by an ordinary unskilled farmer. 3. The Staffordshire knot is in common use among farmers as a mode of castration among male animals, and is reported to be without any mortality.

I am, Sirs, yours obediently,

Jan. 27th, 1891. PTOLEMAIS.

J. S. D.—There can be no doubt, we think, as to our correspondent's clear legal right to a notification fee. The law gives the medical officer of health no power to annul that claim. He would do a service to the profession, having the strong *mens conscia recti*, by pressing the claim in the county court. The leading article in question, on the duties of medical officers of health, will be found in THE LANCET of Sept. 27th last.

Dr. J. Stewart.—Scarcely. We cannot deny the right of patients to change their medical man, even in the circumstances named. But B should act with the utmost reluctance, suggesting coöperation and consultation with A.

BARBAROUS TREATMENT OF LUNATICS.

A MEDICAL MAN who was proprietor of a private lunatic asylum in the neighbourhood of Wiesbaden has just been sentenced to six months' imprisonment for inhuman treatment of patients. The case against him was brought to light by one of the attendants, who was so disgusted by the practices that went on that he left and informed the authorities. It seems that the doctor really believed that corporal punishment was the best treatment for insane patients, and he used to administer it freely to both males and females, the instrument used being an indiarubber tube. In one case evidence was given that a patient who was suffering from disease both of the brain and of the spinal cord was chastised severely on the very day on which he died. For the defence several experts were called, who stated that corporal punishment is considered to be an admissible method of treatment in lunatic asylums!

Medical Officer of Health.—It appears from a table published in the Registrar-General's fifty-second annual report, just published, that the mean annual death-rate in England and Wales during the nine years 1881–89 was equal to 18·9 per 1000, the rate in the individual years ranging from 19·6 in 1882 to 17·8 in 1888. It may be pointed out that the mean annual death-rate in England and Wales was equal to 22·5 per 1000 in 1861–70 and declined to 21·4 in the following decennium, 1871–80; while in the first nine years of the last ten years, 1881–90, the mean rate as above stated further fell to 18·9. The publication of the Registrar-General's quarterly return for the last quarter of 1890, which is due on the 1st prox., will afford the means for ascertaining the mean death-rate during the whole of the next decennium, 1881–90.

Fairplay is thanked for his communication. He will see that the subject of it has not escaped our attention.

Dr. Arnison (Newcastle-on-Tyne).—We shall be pleased to receive the paper.

VALUE OF ISINGLASS IN DIPHTHERIA.

To the Editors of THE LANCET.

SIRS,—During a recent epidemic of diphtheria in this district I have been much struck with the value of isinglass in the treatment of the cases. When the patients, in consequence of the severity of the throat symptoms, were unable to swallow, I used it in enemata with beef-tea. In one case, where for days the patient absolutely swallowed no food whatever, I depended entirely on injection of peptonised beef-tea (half a pint with two drachms of isinglass). The patient's strength was maintained under this treatment. The isinglass causes the enema to be much longer retained. Sir Morell Mackenzie points out that Dr. Massie (who had seen a great deal of this disease at Naples) proved that milk is often digested with great difficulty in these cases, and that he used lime-water to render the milk more easy of digestion. I have found isinglass has just the same power. It readily dissolves in warm milk, and patients seem to have an instinctive fondness for this substance.

I am, Sirs, yours truly,

Coggleshall, Essex, Jan. 27th, 1891. E. A. APPLEBE, L.R.C.P.

Justice will find in THE LANCET of Aug. 8th, 1885, an extract from the *Justice of the Peace*, in which the opinion is expressed that there is nothing in the Education Act requiring a medical certificate without a fee.

DEATH CERTIFICATES.

To the Editors of THE LANCET.

SIRS,—The enclosed illustrates the injustice we lie under in giving our certificates gratis, and the registrars convert them into a source of revenue. I never saw the patient referred to in the registrar's letter alive, so of course my certificate would be out of the question.

I am, Sirs, yours faithfully,

JAMES GILROY, M.B.

Waterbeck, Ecclefechan, N.B., Jan. 26th, 1891.

Jan. 24th, 1891.

DEAR SIR,—A gentleman has called for a certificate of his mother's death for the purposes of an insurance society. A certificate from me is of no use for that purpose unless it contains a copy of the medical certificate with cause of death. I enclose a form, and the gentleman will probably call for it on Monday. I am sorry to trouble you, but cannot help it.—With kind regards, I remain, yours very truly,

Dr. Gilroy, Waterbeck. ——, ——.

THE CAT AS A CARRIER OF INFECTION.

To the Editors of THE LANCET.

SIRS,—In the programme of the coming conference I do not notice any allusion to the consideration of the "domestic cat" as a microbe carrier. Will not a cat lap up the ejecta from infected children, scratch over the refuse heaps and eat the "plate scrapings" from houses where there are infectious diseases, and then after travelling over a large area return to its owner's house, perhaps carrying the germs of disease with it? I think the number of cats should be considerably diminished; exceptions for keeping them could be made for corn stores or farms, or where they might be of some service; there are plenty of ingenious contrivances for destroying mice in private houses.

I am, Sirs, yours truly,

New Brompton, Kent, Jan. 27th, 1891. J. MORTON, Surgeon.

RESPIRATORY CENTRE.

We are indebted to a correspondent for calling our attention to an inaccuracy which appeared in our annotation of last week. Instead of saying that destruction of the alæ cinereæ caused cessation of respiration, it should have been stated that it was destruction of the grey matter in this neighbourhood which did so—strictly speaking, the V-shaped grey matter above the point of the calamus scriptorius. In the middle of the annotation it is stated that "destruction of this region *suspends* temporarily respiratory movements of the opposite side." It is manifest from the context that "suspends" has been printed instead of "permits." We hope again to refer to this interesting subject when Laborde has given full details of the experiments, of which only a preliminary statement has as yet come under our notice.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Sir Spencer Wells, London; Dr. Broadbent; Dr. Prout, Edinburgh; Mr. Alban Doran; Dr. Sainsbury; Dr. Boobbyer, Nottingham; Mr. Marmaduke Sheild, London; Dr. W. Hunter; Dr. Pisani, Malta; Mr. Braxton Hicks; Dr. Haughton, Clapham; Mr. Humphreys, London: Sir James Grant, Ottawa; Dr. W. G. Spencer; Mr. Hill, Crickhowell; Mr. Lloyd Bruce, New York; Dr. Weir, Erycobo; Mr. St. Dalmas; Messrs. Gale and Co., London; Mr. Mortimer, London; Messrs. Bates, Hendy, and Co.; Mr. C. Stretton; Dr. Castle, Rotherham; Messrs. Hertz and Collingwood; Mr. Hodgson, Ecclefechan; Dr. Gilroy; Messrs. Salt and Son, Birmingham; Dr. Thomas, Brighton; Messrs. Mitchell and Co., London; Mr. Chatham, Edinburgh; Messrs. Evans, Lescher, and Evans; Dr. Dutt, Scarborough; Mr. W. Gregory; Messrs. Maclean and Sons, Edinburgh; Dr. Prowde, Sunderland; Messrs. Blondeau et Cie.; Surgeon-Major Lawrie, Hyderabad; Messrs. Lippincott and Co., Philadelphia; Dr. Arnison, Newcastle-on-Tyne; Messrs. Sutton and Co. Preston; Dr. L. Kidd, Enniskillen; Messrs. Richardson and Co., Leicester; Mr. L. Mark; Mr. H. R. Whitehead; Messrs. Harris and Sons; Mr. Applebe, Coggeshall; Mr. Cardew; Messrs. Christy and Co.; Dr. A. H. Robinson; Dr. Fergusson, Banff; Messrs. Keith and Co.; Mr. Meredith, London; Mr. J. H. Thompson; Mr. Hughes Hallet, Derby; Dr. Grose, Melksham; Messrs. Smith, Elder, and Co.; Mr. W. S. Watson; Dr. Ormiston, Glasgow; Mr. Morton, New Brompton; Mr. Mansell Moullin; Dr. Webster; Messrs. Reynell and Son, London; Prof. Rutherford; Dr. J. F. Little; Messrs. Duncan and Co., Edinburgh; Mr. Coles, London; Mr. Saxon; Messrs. Mann and Co.; Mr. Gottlich; Dr. Collins, Manchester; Messrs. Shelley and Son; Dr. C. Purvis; Mr. Durlacher; Mr. Black; Messrs. Smith and Son, London; Dr. Bowie, Blantyre, E.C. Africa; Messrs. Dawson and Sons; Dr. F. P. Atkinson; Mr. Jessett; Messrs. Reynolds and Branson; Dr. Aulde, Philadelphia; Mr. C. H. Robinson; Mr. R. H. Elliot; Dr. Bampton; Dr. Mackinnon, Damascus; Rev. S. Wigan, Maidstone; Mr. Knox; Mr. Campbell, Melbourne; Dr. Chaudhury, Calcutta; Mr. Johnson, Leicester; Mr. Bonney; Mr. Hay; Mr. Kelly, London; Mr. Hope; Mr. W. Scott; Mr. Wand; Mr. Scott, Bloomsbury; Mr. Bayley, Walsall; Dr. Isaac, Wokingham; Dr. Moorhead, Carrington; Dr. Waters, Liverpool; Mr. Greenish; Mr. Roberts, Westminster; Mr. Birchall, Liverpool; Dr. Hime, Bradford; Mr. Bradley, Leeds; Dr. Duncan, London; Mr. Roberts, Sheffield; Mr. Phillips, Birmingham; Mr. Henderson, Dundee; Mr. J. J. Tate; Dr. Gilbert, Germany; Mr. Hamilton, Brighton; Mr. T. E. Mahew; Dr. Mersvan, Austria; M. Roland, Barcelona; Mr. Shaw, Edinburgh; Mr. Deeley, Blackpool; Prof. Le Montais, Detroit; Mr. Armstrong, Newcastle-on-Tyne; Mr. Parsons, Hastings; Dr. Thomson, Oldham; Mr. Brown, Moseley; Dr. Anderson, Newfoundland; Mr. Cooke, Totnes; Mr. F. Piggott; Mr. McNidder, Menston; Mrs. Forrest, Blackburn; Mr. R. Coombe; Mr. Bischoff; J. S. D.; Justus; Diploma; Secretary, Jessop Hospital for Women; B. S.; Nemo; Ptolemais; Secretary, Chichester Infirmary; Justice; General Practitioner; House Surgeon, Norfolk and Norwich Hospital; Zeta, London; F.R.C.S., London; County Clerk, Co. of Fife; Matron, Manchester; Jurisprudence; Durrant's Press Agency; H. W. R., Southsea; Melville; Clerk, Dorset County Hospital; L.R.C.P., Oxford; Dragoon; C. A. L.; Fairplay; An Observer.

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NEWSPAPERS.—*Yorkshire Post, Bradford Daily Telegraph, Melbourne Daily Telegraph, Reading Mercury, Mining Journal, Windsor and Eton Express, Bradford Observer, Surrey Advertiser, Scottish Leader, Hertfordshire Mercury, Leeds Mercury, Liverpool Daily Post, Bristol Mercury, Law Journal, Essex County Chronicle, Architect, Sheffield Daily Telegraph, Spectator, Edinburgh Evening Dispatch, Worcester Daily Times, Staffordshire Sentinel, Public Opinion, Alliance News, Bombay Gazette, New Zealand Herald, Kentish Gazette, Courrier de Londres, Derby Mercury, Northampton Daily Reporter, Mirror, Cambrian News, Coleshill Chronicle, Salisbury Journal, Newbury Express, Bristol Times and Mirror, &c.*, have been received.

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